THE BUILDER

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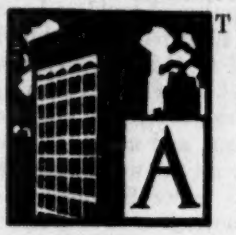
An Architect's Workshop.



AT a professional meeting in Oxford an architect from a large manufacturing centre was heard to exclaim, "Oh, if I could only live here, what work I should turn out!" bearing emphatic testimony to the part played by environment in firing the imagination and cultivating taste.

Out of the large body of architects in the British Isles how many, we wonder, have made an attempt to analyse the influences most potent in determining the character of their work? Most will look back to their student days and honestly fancy that they have ever since been developing their faculties from the basis then laid down, while possibly the independent observer is lamenting the gradual deterioration from the ideals and scholarship of the earlier efforts. How many start a career promising much, only to fall into mediocrity at the time when their faculties should be ripest!

It is all very well to put this down to a lack of conscientious effort, and to accept the dogma that man is born vile, but those who have once seen the light would probably endeavour to follow it if the way be not too hard.

To come back to our starting point, we feel certain that among the influences tending to lower the standard of an architect's work the most powerful is the constant obtrusion into his life of vulgar and sordid surroundings.

Only the man of strong imaginative faculty or of marked force of character can remain unaffected when he sees everywhere around him, day after day, little that will not tend to blunt his artistic perceptions. Of course, there are a few choice spirits whose vitality is such that the mental activity within blots out all unwelcome external impressions, but these are but few, and the average man is incapable of such an attitude of detachment.

How, then, can he save his soul? It is rarely within his powers to choose his environment; his office window maybe looks out on a street or court as innocent of real architecture as it is overloaded with pretentious decoration. No architect in his senses will glance that way twice. The walls of the office bear four or five perspective views of his principal works, the defects in which irritate him none the less because he feels that the work he has in hand, however hard he works at it, will one day take its place in the same mocking circle.

Or mayhap he has reached the callous stage and art has gone out of his life in order to give place to business success and a comfortable livelihood. In either case we fear he has joined the circles of the damned, and for us the only problem remaining is, How might he have been saved?

For the younger man there is still hope. Let his office be a real workshop of the arts, keeping the deadening influence of the outside world at bay by interposing in some way the things that he has learned to look upon as the highest artistic achievements—every moment that his eye looks up from drawing desk or writing-table let it light upon a study, model, or view of some masterpiece, and when time is to spare—and there is sure occasionally to be time to spare—let him take to pieces and recompose some work that interests him; it may come through with honours, or it may lose its place to a new favourite. No matter, every such experiment will help to keep the mind artistically alive. Nor is it important what class of study the architect most affects, so long as it affords opportunities for fixing impressions on the brain. Would it be possible for anyone who has been saturating himself with the characteristics of Greek temples or of Byzantine ornament, studying mass, balance, and scale in a way that enables him to visualise a work as vividly as the shop across the road, to turn to his drawing-board and plot down a design utterly crude and vulgar?

We think not; but we would not answer for the same man if he had been unconsciously spending the same allowance of time visualising the aforesaid shop and its neighbours.

We remember visiting, some years back, the office of a young architect whose work had excited great interest, and finding him in a small room with naught but brown brick chimneys and grey roofs as an outlook. Within, however, the walls all round his desk were covered almost two deep with scraps, sketches, photographs, etc., of all kinds of subjects, selected solely as calling to his mind some beauty of form or line. The apse of a Romanesque cathedral jostled a Linley Sambourne drawing from *Punch*, a note of his own on a college gateway was half covered by a scrap reproduced from an old fresco. Sometimes there was a weeding out, but more often the new-comer was simply pinned on the spot least in demand.

The connexion between one of Phil May's "donahs" and a mind concentrated on the production of a particularly restrained and scholarly type of design might not be obvious to the casual observer, but it no doubt existed, for nothing was on those walls that did not bear a part in the inner life of the worker within them. The little office was obviously a workshop, arranged with the object of stimulating the mental processes and regardless as to how the outsider might be impressed.

How rare are the offices that really possess this character of the workshop, and how frequent those merely conveying the idea of a professional consulting-room, and giving few indications that their occupants are really interested in the arts at all! An architect in one of these is wilfully throwing away a means of protection within his reach against the deadening influences that surround him, and he will, if he be not, as we before hinted, a man of genius, eventually succumb, and his works drop down to the same monotonous level. The studies of his student days will slip gradually from his mind and their place will be taken by mental images of the buildings among which his life is passed. These, however much he may detest them, will inevitably tend to wipe out the memories of better things unless by persistent self-control he keeps such memories alive.

The young architect in his workshop may afford to ignore casual criticism, and, indeed, ought to do so, unless honestly convinced. It is better that his ideals should be his own, even if wrong, than borrowed and insincere, with no basis of conviction to back them up. Experience and intercourse with his peers will tend to correct his errors, but if he forces himself to affect likes and dislikes because he imagines they are right and proper, then farewell to any hope of logical development. The real development will come of itself if he persistently keeps his mind fixed on artistic problems; his sympathies will broaden, and his capacities expand till his work, even if it does not indicate a highly imaginative temperament, will, at all events, prove acceptable by displaying cultivated taste and a clear recognition of the constituents of genuine architecture.

SUB-CONTRACTORS.

AT the annual dinner of the London Master Builders' Association recently the President referred to the grievance that builders have owing to the inordinate amounts now included in contracts to be paid to sub-contractors as directed by the architect, and as all builders seem to be suffering great inconvenience from this custom it will be wise to consider the matter carefully, and if possible find a remedy, in order that works may be carried out more harmoniously and more satisfactory to the contracting parties and the architect.

It is clear that architects should not specify work to be done by sub-contractors which the builder is just as well able to carry out economically; such works, for example, as masonry, joinery, plumbing, drainage, and gas should, in fairness, not be sub-let, but left in his hands to carry out.

Perhaps builders are themselves largely responsible for the prevailing conditions, as it cannot be denied that for years past a number of builders have made a practice of sub-letting as much of the work entrusted to them as possible, but in that case the builder makes his own terms and has the sub-contractor and his men under his control, and as he is to be held responsible for all the work done by the sub-contractors under the maintenance clause in his contract it is only right that he should have a voice in the selection of such firms and enter into such a contract that he in his turn can hold them responsible for any defects that may arise afterwards. This is most important when the work placed in the hands of a sub-contractor is of a constructive nature, more particularly when new and untried materials are being experimented with, as then the position of the builder is frequently one of great difficulty, because in the event of any failure attempts are sometimes made to cast the responsibilities upon him.

The principal grievance seems to be that architects get in tenders from the various firms for their specialities, and in due course accept the estimates on behalf of their clients, and then inform the builder what they have done, instead of instructing him to do so and giving him the opportunity of making a proper contract to cover him against all the liabilities that he himself is subject to under his contract, and the result of this arrangement is that the works are often delayed by the sub-contractors, and the builder is held responsible for non-completion of the works, which is manifestly unfair.

Difficulties arise also over the Employers' Liability and Workmen's Compensation Acts. Sub-contractors come upon a building and use the plant provided for them, and not infrequently disturb the scaffolding, yet the responsibility for any accident caused by their men falls, in the first instance, upon the builder, who, should the sub-contractor happen to be financially unsound, obtains no redress, and has to bear the whole loss.

Complications also arise from loss and damage to plant, "starting and leaving off time," "meals," "overtime," all of which could be avoided by a proper contract being entered into to start with, placing the sub-contractor under the control of the builder, or by allowing him to employ his own men—as he did until comparatively recently.

The question of payments to sub-contractors also leads occasionally to complications. The fair way of dealing with this would seem to be to include the amount payable to sub-contractors in the builder's statement of claim to the architect for a certificate, so that the amounts due to the sub-contractors would be included in the next certificate payable by the employer. Some architects, however, request that the instalments due should be paid to the sub-contractor before the amounts are received by the builder, which means that the contractor is financing the employer, because it sometimes happens that the architect's certificate is not honoured for weeks after it has been granted, and should the employer find himself in financial difficulties the builder may lose his own remaining balance and also the amount he has paid to the sub-contractors.

It is safe to assume that builders are of opinion that all sub-contracts should pass through their hands. The conditions of order should be absolutely identical with those of the head contract both with regard to maintenance, payments, and responsibilities, and if architects are going to follow what has undoubtedly become a general practice of getting in net estimates from specialists they should make it a condition that the sub-contractors will enter into a contract with the builder on terms identical with those by which the builder is himself bound as regards maintenance, payments, and responsibilities.

There is also the question of cash discounts. Very often sub-contractors refuse to allow even a cash discount of 2½ per cent. for prompt cash because the quotation to the architect is strictly net.

Under the Royal Institute of British Architects' form of contract builders are entitled to cash discounts on "prime cost" items (Clause 27), but apparently this is not the case with regard to "provisional sums," which are dealt with under Clause 28. This hardly seems reasonable, and is perhaps one of the points that should be adjusted when a new form of contract is being considered.

There are doubtless other matters in connexion with this subject that have caused inconvenience and possibly loss to builders, and it would be a help to everybody concerned if they could be made known. We shall welcome correspondence on this important subject from our readers in the hope that matters may be adjusted to the benefit of the building trade in general, and help architects and their clients, by making contracts work more smoothly in future than they have done in the immediate past.

It will be said that the builder has the remedy in his own hands if the Royal Institute of British Architects' form of contract is used, because Clause 20 provides that "no . . . . sub-contractor shall be employed upon the works against whom the contractor shall make what the architect considers reasonable objection, or who will not enter into a contract with the contractor upon terms and conditions consistent with those in this contract, and securing the due performance and maintenance of the work supplied or executed by such sub-contractor, and indemnifying the contractor against any claims arising out of the misuse by the sub-contractor or his workmen of any scaffold erected or plant employed by the contractor," etc. But although it is clear that the builder has this right there are not many who would care to risk offending the architect over such matters, and it therefore seems as if architects should realise the situation clearly and endeavour to meet the views of the builders as far as possible on this important subject.

Probably the best way to try and do so would be for the Council of the Royal

Institute of British Architects to appoint a subcommittee to meet a similar committee appointed by the London Master Builders' Association to discuss the subject fully, and for each committee to report to the respective Councils, and if possible to issue a joint report which could be widely circulated so that the views of architects and builders should be known.

If architects and builders would give our readers the benefit of their experiences of the way the various clauses operate it would be valuable information to lay before the committees we have suggested, and we shall be glad to print communications on the subject.

NOTES.

R.I.B.A. Charter and By-laws.

THE Royal Institute of British Architects has now printed and issued the new Charter and By-laws. As these have been the subject of so much discussion and comment during the past few years we feel it superfluous to make any remarks on them at the present time, though it is not improbable that they will become of considerable interest a little later, when the question of a Registration Bill arises. We print in another column an interesting letter from Mr. E. T. Hall on the subject of the Licentiate qualification. We understand that applications for admission to this class are being received by the Royal Institute of British Architects at a rate of some fifty per diem, a rate that promises well for the success of this scheme.

The Manchester Art Gallery.

THE Royal Infirmary Site Special Committee of the Manchester Corporation concluded their inquiries on Monday last. Many proposals have been before them, including one for leaving the site of the old infirmary as an open space, and one for building an exchange upon it, and the conclusion they come to is to recommend the Council to adopt a scheme for the erection of a central library and an art gallery only upon part of the area. We hear they will ask the Council to authorise them to proceed with the necessary preparations for obtaining competitive designs from architects, with power to offer suitable premiums for such designs. In compliance with the Committee's instructions and resolutions the City Architect has submitted a scheme for the erection of a library and art gallery. The proposed building will occupy an area of not more than 5,500 sq. yds., and the estimated cost will not exceed 250,000*l*. The Committee have approved the City Architect's scheme, and are submitting it to the Council on April 27 as a general outline of their proposals, which are based on the above-named expenditure of 250,000*l*. As in the value of the sites of the existing Free Library and Art Gallery the city already possesses a sum available for the proposed rebuilding somewhat larger than this the city will be put to no expense, the library and gallery will be splendidly and commodiously housed, and the great Piccadilly site utilised to the best advantage.

Plaster of Paris.

IN a communication to the French Society of Civil Engineers M. L. Perin discusses a new method of producing plaster of Paris, by which he claims that material of superior purity and strength is obtained. One disadvantage attaching to plaster as made in the ordinary kiln is the presence of calcium sulphuret, which tends to injure embedded metal, and consequently militates against the employment of reinforced plaster in building construction. The new process described by the author involves the use of a special kiln, which is said to effect the dehydration of gypsum without altering the chemical composition of any part of the material. From a table accompanying the paper it appears that while the average tensile resistance of plaster manufactured in the ordinary manner is from 13 lb. to 17 lb. per square inch, twelve hours after mixing, the resistance of plaster produced by the new method is 94 lb. per square inch at the same age. Assuming the correctness of these figures, it is clear that the process deserves attention in this country. The kiln recommended by M. Perin is certainly more costly than the ordinary plant, but as it offers compensation in the way of fuel economy, besides securing the production of superior plaster, its adoption seems to promise advantages both to manufacturers and consumers.

The Moat and Bridge, Hampton Court Palace.

THE Committee of Supply have agreed to a vote of 3,500*l*. for expenditure upon the restoration of the moat and bridge in front of the west entrance into the Palace. During the winter months a large party of labourers have been employed in cleaning out the moat, which is to be filled in with soil up to near the water level and sown with grass. The brickwork of the moat wall has been repaired with old Tudor bricks recovered from the rubbish. Recent investigations evince that the moat wall was constructed in 1536, and that the men worked night and day at a wage of fivepence per diem, with one penny extra for ladling out water. The rubbish is found to consist mainly of *débris* of the apartments of Henry VIII.'s time, which were pulled down to make way for William III.'s buildings. There are fragments of carved and moulded stonework, gargoyles, etc., a fine panel bearing the coat-arms of Queen Jane Seymour, and a multifarious collection of domestic instruments and tools, spoons, knives, trenchers, plates, bottles, toilet articles, pipes, and the like of the XVIth and XVIIIth centuries. Two large archways have been opened out in the north wing of the Palace, which seem to have served to convey water into the moat for flushing the drainage, and some brick steps have been found which give access into the moat from an underground passage beneath one of the private suites of apartments. The remains of the parapet of the four-arched stone bridge will enable the Office of Works to reconstruct it after the original design. In our "Note" of March 27, 1909, we gave a description, with drawings, of Henry VIII.'s bridge crossing the moat to the Great Gate House, which had then been just discovered.

Brickmaking.

ON Monday evening Mr. Alfred B. Searle delivered the first of four lectures on "Modern Methods of Brickmaking," at the Royal Society of Arts in the Adelphi. The lecturer, in describing the origin of the use of clay as a building material, referred to the interesting fact that experiments recently made in America tended to show that the washing of the clay in water in which straw has previously been soaked increases its plasticity, while the insoluble portion of the straw adds to its tenacity in drying. This interesting result adds point to the sufferings of the Israelites in Egypt. Mr. Searle emphasised the distinction between baked and burned bricks, mentioning the tendency of manufacturers towards insufficient burning in order to satisfy the demand of the bricklayer for an easily worked brick. Sun-dried bricks are, of course, practically unknown in this country; in some districts in Germany, notably in the uplands of Nassau, they were in common use as late as the first quarter of the XIXth century. It is desirable that the brick manufacturer should possess a certain amount of geological knowledge. In one case within the lecturer's experience clay was being brought from 12 miles away when a sufficient deposit existed within a distance of a quarter of a mile. Nor should he be too conservative; an instance occurred where an improved design of shovel led to an increase of 18 per cent. in the amount of clay excavated by hand from a quarry working. Machinery must be made to fit local conditions; the London Brick Company work a deposit of Oxfordshire clay 60 ft. deep at Peterborough, and are able to excavate it by the aid of a steam navvy at the rate of a ton a minute; contrast this with the clay strata in the Isle of Wight, seldom much more than a foot in depth, and alternating with other strata. The use of machinery tends to less careful preliminary purification of the brick-earth, the grinding and milling power available being proportionately greater. Mr. Searle pointed out that the term "brick-earth" would be preferable to "clay," especially in drawing up agreements, as true clay, of course, forms only a portion of the constituents of a brick. An agreement to "take away all the clay" would, if too literally interpreted, land the brick manufacturer in a quandary. The lecture was admirably illustrated by lantern slides.

NEW CHURCH, TALYBONT.—The Bishop of St. David's recently opened a new church at Talybont. The design for the building was prepared by Messrs. Deakin & Howard Jones, architects, Borth. The builder was Mr. J. T. Jones, Cefn, Ruabon. The total cost has been about 1,600*l*.

THE POLYDON BAPTIST CHURCH AND SCHOOLS, SOUTHAMPTON.—The foundation-stone laying ceremony of this building took place on the 6th inst. The buildings are designed in late Gothic, freely treated. Externally, the facings are of red bricks, with Bath stone dressings. The complete scheme embraces church with lofty tower, seniors' school, intermediates' school, and juniors' school. The latter section of the school is to be omitted for the present. The contract for the present portion amounts to 5,795*l*., and is let to Mr. J. Nichol, of Bitterne Park, Southampton. The architects are Messrs. George Baines & Son, Clement's Inn, Strand, London, whose designs were selected in a recent competition.

HERIOT'S HOSPITAL, EDINBURGH.

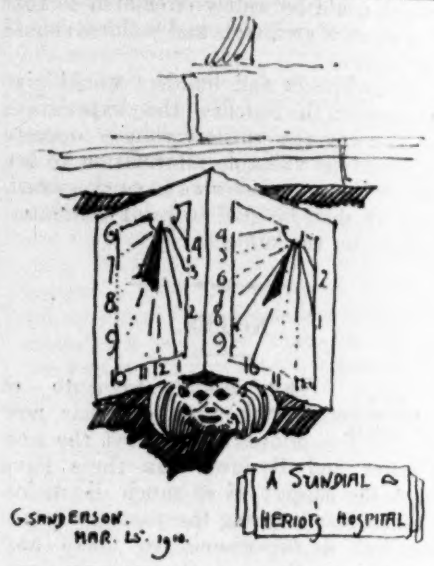
ALTHOUGH this building has been many times described, and has even had books and papers specially written and read upon it, nevertheless it is still uncertain who the architect was of the building that George Heriot has left to Edinburgh for "the bringing up and educating as far as means will allow of so many fatherless boys, freemen's sons of the town of Edinburgh."

In attempting to give a brief sketch of this building, which ranks among the finest specimens of architecture in the British Isles, it would be perhaps more interesting to give in the first place some little information as to its founder and also to put before the reader what evidence there is as to the probable architect of the building.

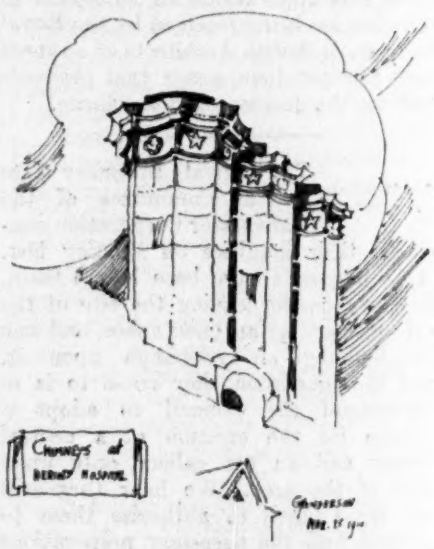
George Heriot's persevering industry and Scottish business capabilities soon made his business, that of a goldsmith and money-lender, a successful one. He was made court goldsmith to Anne of Denmark in 1597, and this appointment may be said to have "made him." He became the court jeweller of James VI. in 1601, and royal patronage bringing that of the nobility as well, Heriot did a brisk business. At one time Heriot was a creditor of the Crown's to the tune of 15,000*l*. George Heriot is an excellent example of a man who, having made his money by hard work and trustworthy dealings, devoted a large sum of money to a most deserving object.

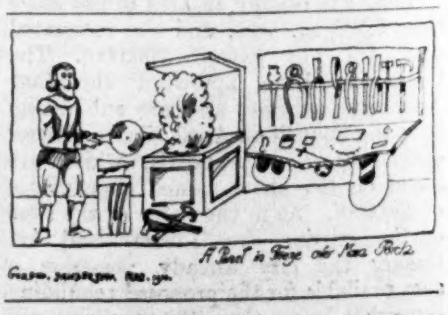
Heriot willed that his hospital should be governed by statutes, and his nephew, Dr. Balcanquall, was appointed chief executor, the other executors being selected from leading citizens of Edinburgh and other Scottish notabilities. By some the building is said to be the design of this Dr. Balcanquall. The other theories are that the building was the design of Inigo Jones, or else the joint work of certain "master masons." It is not very likely that Dr. Balcanquall was the architect. In those days an architect was closely allied with a "master mason," and Dr. Balcanquall's training for the church, of which there are ample records, is not likely to have fitted him for the designing of buildings of the merit which Heriot's Hospital possesses.

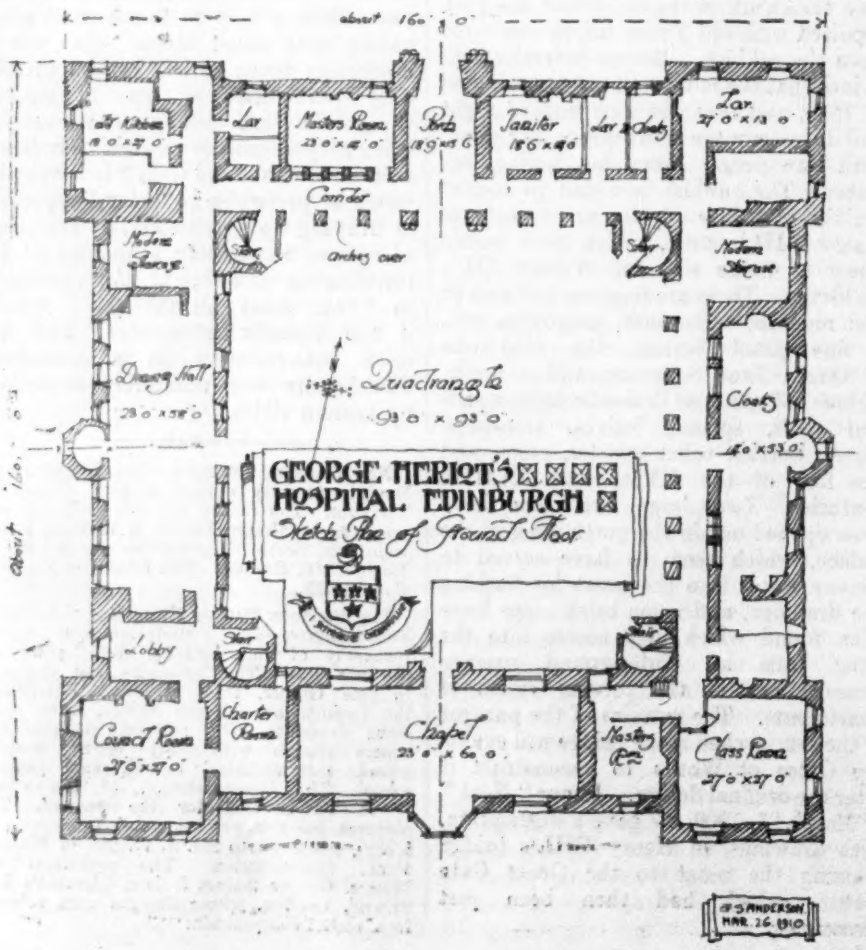
Dr. Balcanquall was a friend of Inigo Jones, and it is said that the latter merely gave him the plan for the building, and here Inigo Jones's connexion with the building ceased. This fact seems to be substantiated by there being no mention of Jones's name in the records. The building, however, contains many features characterisitic of Jones's work, and there is marked resemblance between the hospital and St. John's College, Oxford, while the Fredericksborg Palace in Denmark, also Jones's work, resembles the hospital in many of its details.



Frequent mention is made of certain master masons in the records, among whom the names of Wallace and Ayton rank most prominently. Contracts entered between the governors and these men are recorded, and their services were suitably acknowledged. William Ayton was bound "to devyse, plott, and sett doun what he sall think meittest



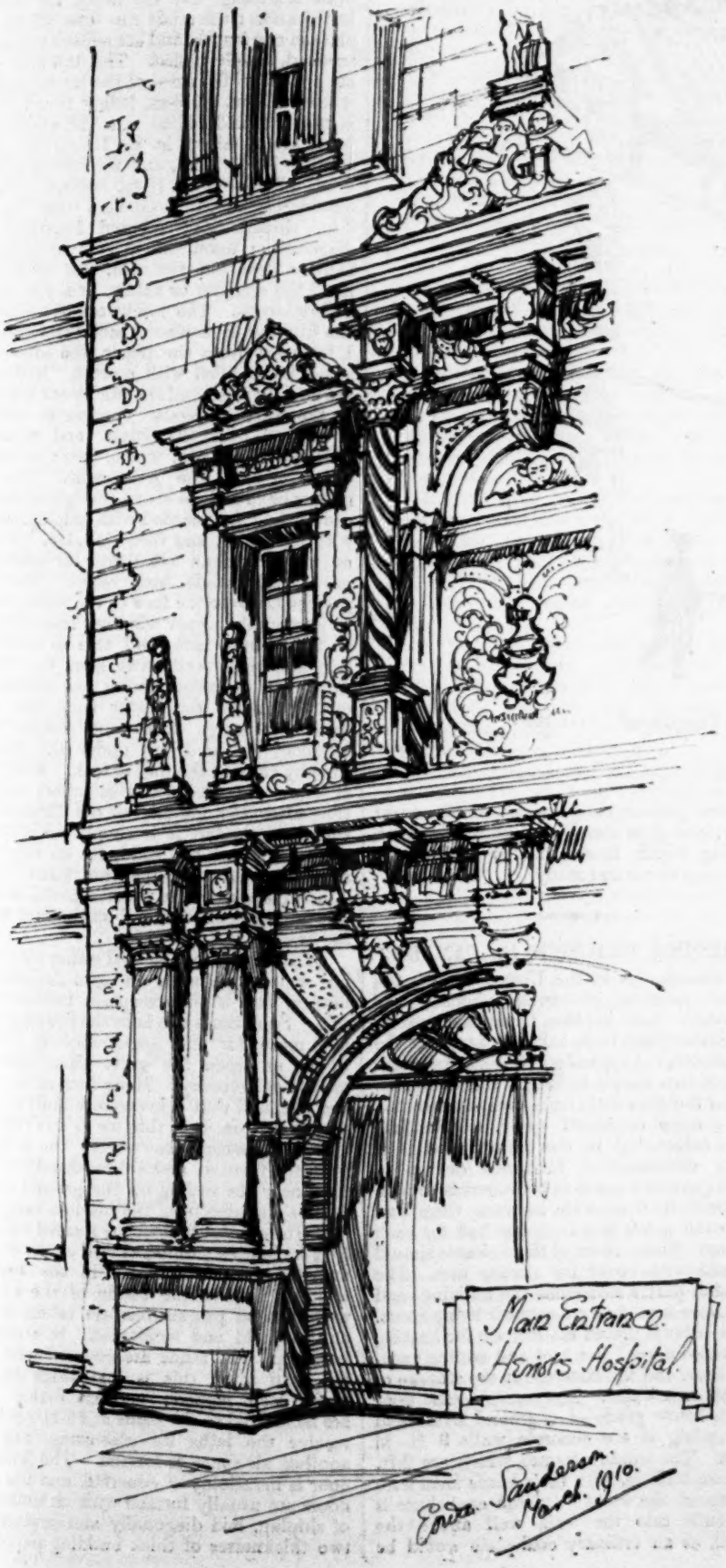


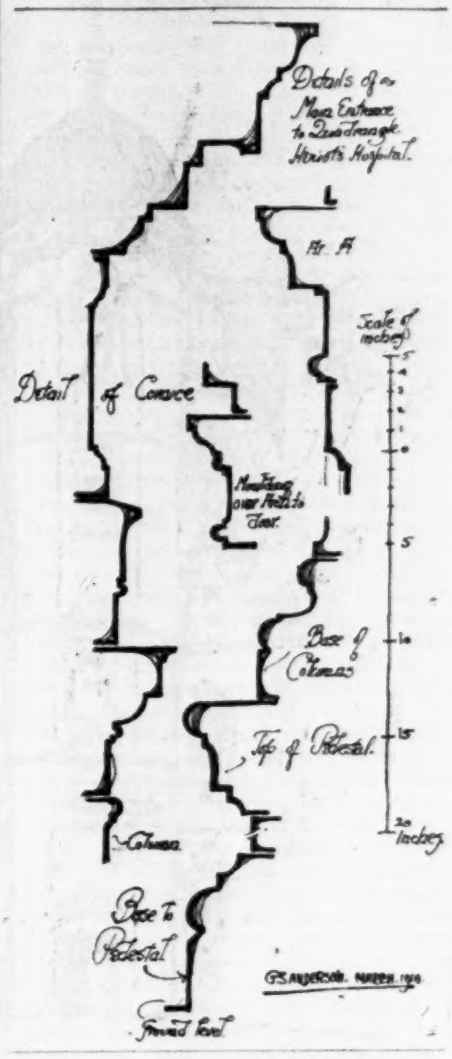


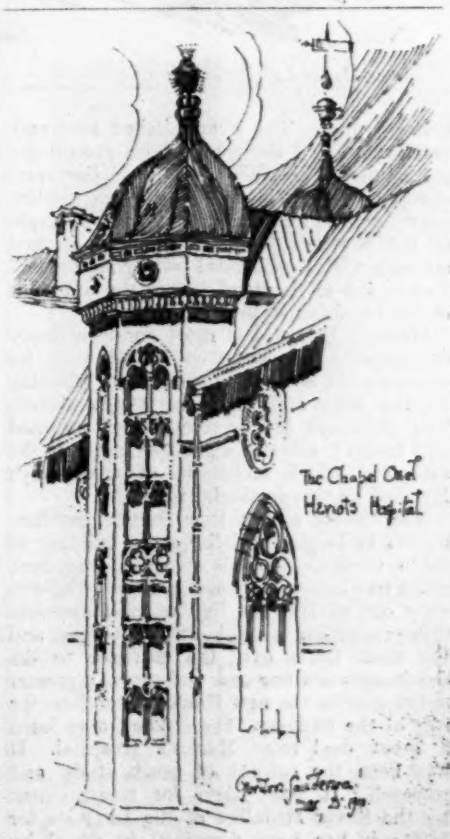
for the decorment of the said wark and pattern thairof alreddie begun, where any defect be found, and to make with his ain handis the haill mowlds alsweil of timber as of stane belonging generallie to the said wark, and generallie the said William Aytoun binds and obliges him to do and perform all and quhatsumevir umquhile William Wallace, last Maister Maisone at the said wark aither did or intendit to be done at the same."

The harmonious disposition of the various parts seem to point to the original plan as the work of Inigo Jones, while the irregular arrangement of the rooms, which seem to have been so placed to suit special requirements asked for at a later date, suggest that the execution, together with the detail, were the work of "master-masons," who were instructed from time to time by the executors and governors. The fact that Dr. Balcanquall had been in Denmark may also have led him to favour the Dutch forms in vogue there. This briefly summarises the evidence as to its designer or designers, and one is bound to admit that its origin is clouded in obscurity.

The architecture of the building well expresses the purpose for which the building was intended. Neither ecclesiastical nor baronial in its character, Classic is blended with Gothic with good effect. Whether this was intentional or merely a tentative effort on the part of designers imbued with Gothic tradition to produce something in the then new Classic style it is hard to say, but the result is not unpleasing. Viewed from a distance little idea of the plan can be gained, but on coming nearer and entering the Court the building is seen to be of a generally







uniform plan. The steep pitched roof and vertical lines in the composition are all the marks of Gothic influence, while the ever-changing variety in details, such as window heads, gables, and turrets is a good example of the Scottish Jacobean, a style marked strongly with Continental feeling, and which was in use in Scotland before the adoption of the Jacobean style in England.

Heriot's Hospital is most conscientiously decorated. The inner courtyard with its open arcade is rendered still more pleasing by the angle staircase seen in the sketch. The chimneys are especially well grouped and treated, and are a good example of the attention which architects of those days lavished on this particular feature.

The towers at the four corners are four stories in height, and the main building of three stories. Special attention has been given to window treatment, and two windows only out of 200 are similar in decoration. The proportion throughout is excellent, and the main tower over the entrance to the quadrangle is a fine one, and shows a greater striving after the new Renaissance than the rest of the building. The student may learn a great deal from Heriot's Hospital. It has been the subject of much study and research. It was taken for measurement by the Silver Medallist of the Institute for 1892; it has been described in detail by Mr. Blanc, of Edinburgh, and has been the subject of several books. To many these notes will not be new ground, but it is hoped that they may especially awaken the interest of those just starting on an architectural career, and give them some knowledge of a building which it will be to their great advantage to see and study.

BUILDING PRACTICE IN CANADA.

IN Canada, as in the United States, the greater number of dwelling-houses are "framed," but in the Dominion special precautions have to be taken to keep out the intense cold. A typical middle-class dwelling-house is two stories in height and detached. In plan it differs little from ours, except that it has more cupboard space, a verandah, and a cellar, but in the construction it is totally different. A favourite device to obtain cupboard space in bedrooms is to plan a space 2 ft. 6 in. wide between them and divide the space into two, one half for each bedroom. One or more of these closets should be lined with cedar for storing furs. The verandah partly surrounds the building, and in summer is used as an open-air living-room. In the cellar is placed the furnace for heating the whole house, the fuel and winter vegetable bins, and the cisterns for the storage of the soft rain water. The cement cellar floor is 6 ft. below grade—*i.e.*, ground level—and surrounding it are concrete walls 9 ft. in height. The window frames, which are 2 ft. high, are built in, with their heads level with the top of the walls. An iron coal-chute is also built into the wall, well above the ground, as an ordinary coal-plate would be useless in the winter, when the snow lies several feet thick upon the ground, and the under layers get frozen as hard as granite. Before the ground is filled in round the basement walls these walls are tarred, from the footings up to grade, to keep out the damp, and the portion above grade is plastered and blocked out to imitate ashlar. On top of the footings is laid a 3-in. unglazed weeping tile drain, with open joints; this is covered with coarse gravel, and then the ground is filled in. The water from the weeping drain is conducted into a catch-pit in the centre of the cellar, and from there it is carried into the main drain.

Upon the cellar walls is raised the wood superstructure. The framing is very light; the studs are 2 in. by 4 in., spaced up to 16 in. centres, and the sills and heads are of the same scantling, but the heads are doubled in thickness; the studs run from sill to roof-plate in one length, and are neither braced nor tenoned, simply nailed. The first-floor joists are spiked to the sides of the studs, and also rest on a 1-in. by 6-in. ledger board, which is notched and nailed into the studs. The joists are usually 2 in. by 10 in., the ceiling joists 2 in. by 6 in., and the rafters 2 in. by 4 in., all spaced at 16-in. centres. On the outside the studs are covered with 1-in. and 6-in. shiplap—*i.e.*, rebated boarding—laid diagonally; upon this is put tar paper, to help to keep out the cold, and on this are fixed the shingles or siding, or a 4-in. veneer of brickwork. The brickwork is secured to the framing by means of metal ties and built 1 in. away from the paper, the intervening space being filled with mortar. Red bricks are usually used, and the brickwork is pointed as the work proceeds. A piece of soft coal is rubbed over the joints, and leaves an indelible black line, which forms a pleasing contrast with the red bricks. The roof rafters have a slope sharp enough to shed the snow; they are boarded with shiplap, covered with tar paper, and then shingled. Shingles are the American substitute for slates, and are usually made from cedar. The eaves project far over the face of the walls, serving to protect the upper windows from the glare of the summer sun, and also to throw the rain and snow well away from the foundations, for in many houses the gutters are omitted, since the water from the snow, as it alternately thaws and freezes, has a tendency to back up under the shingles, thereby causing the roof to leak. Rough cast is frequently combined with timber construction after the manner of old English half-timber work, but it is simply an imitation; the timbers are not solid, for on top of the sheathing and tar paper are fixed 1-in. by 2-in. firring strips to receive metal lathing; this is plastered over, and on the face of that are fixed slabs 1 in. thick.

As every house is heated either by hot air, hot water, or steam, an open fireplace is a luxury, and is the exception instead of the rule. Sometimes one is in the drawing-room, but more for the appearance of comfort which an open fire gives than from any motive of necessity. Many houses have only one flue, and that is invariably built of brickwork; a 10-in. iron thimble is inserted in it in the basement to receive the iron flue from the furnace, and a 6-in. thimble is built in it near the ceiling on the ground floor to receive the pipe from the kitchen range.

The interior partitions are framed with 2-in. by 4-in. lumber; these, as well as the ceilings, are lathed and plastered in the ordinary manner, but on the inside of the external walls special precautions are taken to keep out the cold and incidentally to stiffen the building. The studs are covered with shiplap, and upon this is laid thick building paper well lapped; vertical firring strips are next fixed to the studs at 16-in. centres to receive the laths for plastering, and thus another air space is formed. The basement floor is invariably of concrete, and the upper floors are usually formed with an under floor of shiplap, laid diagonally and covered with two thicknesses of thick building paper, and

upon this is laid the upper floor, which is usually 1 in. by 3 in. tongued and grooved, and is either edge grain fir, maple, or quartered oak. Fir floors are twice oiled after they are laid, and the hardwood floors are first oiled and then coated with shellac, and twice waxed and polished. Verandah floors are painted. In designing the finishings provision has to be made for extremes of temperature. As in summer the bottom sashes are kept open night and day it is then necessary to fit a wire screen in the lower half of the frame to keep out mosquitoes and other insects. In the winter this screen is taken out, the window closed, and a glazed sash, termed a storm sash, the full size of the window opening, is fitted into the frame and secured with buttons or hooks and eyes. These sashes are usually fixed on the outside of the window, and have a sliding or hinged panel fitted in them, which may be opened for ventilation when required. The air space thus formed between the two sashes is found to be of great assistance in keeping out the cold. The external door openings are treated in a similar manner; in summer they are fitted with light doors having small mesh wire panels; in winter these are taken off and heavy storm doors, having a small glass panel at the top, are substituted. Both these doors open outwards, and are hung to the same frame as the front doors. Nearly all doors are hung with loose pin butts, as such doors are more quickly hung and easier to take off, when necessary, than when hung with ordinary butts. It is the custom to hang doors ¾ in. off the floor, and to fit a ¾-in. by 4½-in. oak saddleback threshold under them. At the angle between the skirting and the floor a small quarter round is fixed, which secures the following advantages:—Any shrinking of the skirting is concealed, the floor is more easily swept, and it is easier to lay a carpet with its edge ¾ in. away from the skirting than when it is fixed tight up to its flat face. The dining-room is frequently panelled round with quarter-cut oak, and the ceiling panelled out with the same material. The internal plastering is usually two-coat work, sometimes the finishing coat is lime putty, but generally the whole of the plastering is done with wood-fibre plaster.

The external woodwork, with the exception of the shingles, which are stained, is painted; inside the woodwork is generally stained and varnished. It is first given a coat of filler stain, then shellaced and twice varnished. Oak panelling is waxed polished, and walls are more often tinted or painted than papered.

The plumbing work is of a high grade, for all pipes are inside the house; but they are kept away from the external walls to prevent freezing, and drains and water mains are laid at least 7 ft. below the ground, so as to be below the frost line. It is not usual to case in soil and other pipes, but they are painted with bronze or aluminium paint.

For heating a small house hot air is the cheapest, but in larger buildings, though the first cost of installation is greater, it is found that to heat by steam or hot water is more economical.

For fire-resisting buildings a typical business block would have the basement walls built of concrete, the rear and party walls also of the same material, or common brick, and the façade is faced with pressed bricks and marble or stone dressings. Facing bricks are laid in courses of stretchers, with headers every sixth course, or else all stretchers tied into the backing with metal ties. The walls are carried up 2 ft. above the highest part of the roof to minimise the spread of fire. As near to the centre of the building as possible is placed a 5-in. rainwater pipe, and the roof, which is almost flat, has a slight fall from all sides to this "conductor." The roof rafters are 2 in. by 6 in., spaced at 16-in. centres, and are made to form trusses with the ceiling joists. The rafters are covered with 1-in. by 6-in. rough boarding, and upon the boards are laid five thicknesses of roofing felt with a coating of tar between each sheet; then a thick layer of tar and pitch is mopped over the whole surface, and in it is embedded fine gravel. The walls are flashed with galvanised iron flashing; external cornices are also of this material, painted the same colour as the stone dressings and then sanded. The ceilings of the stores are covered with ornamental tinplate and painted. All exterior walls are back plastered on the inside, then firred out with 2-in. by 2-in. firring, fixed vertically at 16-in. centres to receive the laths for plastering; thus an air space is formed that prevents the frost from coming through the plaster into the building.

In Canada a contractor does not "submit his tender," but he sends in a "bid"; he does not give an "estimate," but a "figure"; and if a Canadian answers a question in the affirmative he does not often say "Yes," or "I will," or "Certainly," but will almost invariably say "Sure."

Canada is a country in the making, and, speaking broadly, the people have not so much money to spend on high-class buildings as in the United States, but every year the class of work done is improving, and this year it is anticipated that the number of buildings erected in the Dominion will surpass all previous records both in quality and quantity.

"DRY ROT" IN TIMBER.

The Royal Institute of British Architects have sent the following communication to their members:—

Referring to the leaflet on this subject issued last month, the Council desire to lay down a few principles which may guide architects in minimising and possibly arresting the disease of dry rot in new buildings, viz.:—

1. No timber should be used in such a position that the moisture in and around it cannot be readily evaporated, as, for example, if floors are constructed of solid concrete (with or without steel) wood fillets should not be nailed underneath to receive the ceiling.

2. No wood slips should be built into or on the top of concrete and afterwards covered with an impervious floor, and no wood boards should be laid direct on the concrete and afterwards covered with an airproof material such as linoleum, oilcloth, etc.

3. All ground under a wooden floor should be cleared of any vegetable or fungoid growth and covered with cement concrete or asphalt, and this should be left as long as possible before any joists or flooring are laid.

4. No wooden pegs communicating with the earth beneath should be left in and through the covering over the earth.

5. Provision should be made for the abundant introduction of fresh air underneath all parts of suspended ground floors by means of inlets, and particularly at all angles, so that cross-currents may be induced.

6. The concrete under floors should be thoroughly cleared of all small pieces of wood and shavings, as it has been found that the spores in these pieces of wood, drawing the moisture from the concrete, have been a means of spreading the disease.

7. In upper floors of wooden joists if a pugging be inserted for sound-proofing it is suggested that this be of some dry substance, such as slag-wool, but in no case must an impervious material be used for the ceiling beneath or the floor covering above.

Suggestions have been made by experts and others to creosote the ends of all joists built into a wall, but this is not generally practicable, as the odour of the creosote in a residence would be very objectionable to many.

Proposed Hippodrome, Bristol.—It is proposed to erect a hippodrome in the Bedminster district. The plans, prepared by Mr. B. Crewe for the Strand Syndicate, Ltd., have been passed by the Bristol Sanitary Committee.

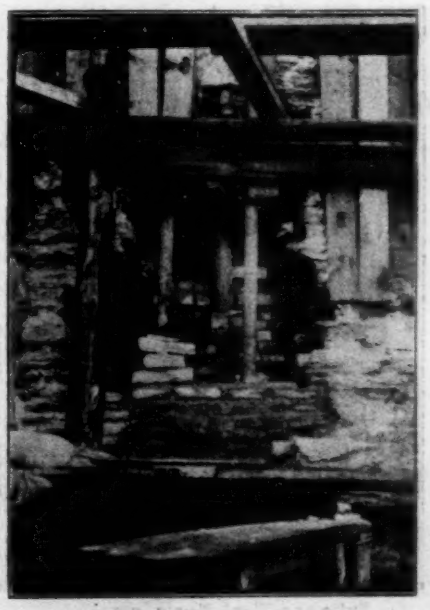
THE CARPENTERS' HALL LECTURES:

The Craft of Repairing Buildings.

The last of the present series of lectures on "Arts Connected with Building," arranged by the Carpenters' Company, was delivered in Carpenters' Hall, London-wall, on Wednesday last week, when Mr. Thackeray Turner lectured on "The Craft of Repairing Buildings."

The lecturer said there was a striking difference between present-day views of architecture and the views taken by those living during any great period of building in the past. No people could have built so sumptuously as did our forefathers if they had not cared greatly for the work which was being done, and we know from the ruthless manner in which the mediæval builders swept away or altered the work of their predecessors that they set no value upon it, but only on their own work. At the present time there is a little real architecture being done—a very little indeed when compared with the enormous amount of building which had been going on during the last fifty years—and even this little had not interested the public or the educated. No; it was only buildings of the past which now aroused interest and admiration. To know nothing about such buildings might almost be said to mark a man as uneducated. We could only hope that all this study would ultimately have a good effect on architecture whenever it did come to us, and it was clearly our duty to preserve the old buildings, at any rate until we could do something better ourselves. The mere fact of our caring so much about these old buildings was a proof that we were not producing a national architecture, because history showed that a people who were doing so did not care about anything except their own work. As matters stand, it was clearly our duty to preserve the grand buildings left to us, and, above all, to preserve them in an authentic condition.

Having considered why buildings need repair and the causes of decay, the lecturer considered how these troubles could be overcome, and he took a concrete example in Sutton-on-Trent Church tower in Nottinghamshire, a XIIIth-century building



Work in progress to Sutton-on-Trent Church Tower.

with a later stage added. It had been in a critical state for a long time. Owing to bad mortar the core of the wall was like so much loose rubble, and the walls were bulging and settling in spite of support being given by iron bands, and fissures were coming between the main walls and the angle buttresses. Both the architectural and

engineering professions had reported that the only course was to pull down and rebuild. That was to put modern workmanship in the place of ancient, so that the building when finished would not have been an old building. It was no disgrace that this advice should have been given, for those who gave it rightly said that it was dangerous even to pull it down. Mr. William Weir said he could repair the tower without rebuilding, and he did so successfully. To give some idea of how bad the walls were, the walls were not only cracked on the face, but were splitting vertically in their thickness. What Mr. Weir argued was that the walls could not fall down if they could not fall outwards. He therefore began by planking the walls all over, and connecting the opposite faces together by means of iron tie rods. Fortunately, the original builders had worked with putlogs going right through the walls, and this gave an opportunity of taking the rods through the walls without cutting holes, which might have been dangerous. When all this had been done the repairs were begun on the inside, starting at the ground level, for it was found that the foundations were quite sound. Loose stones were removed and the core of the wall taken out as far back as the outside facing stones. New work of brick and of concrete was put in to take the place of the old disintegrated work, and the backs of the outer facing stones were carefully bonded into the new work, care being taken to prop up the old work above the part being repaired. In one place the outer stone face had bulged so badly that it could not be bonded in as the work went up, so toothing was left and the bulged portion was rebuilt vertical and bonded into the toothing when the rest of the walls were finished. The tower was 60 ft. high and the walls 4 ft. thick at the ground level, with a 6-in. set-off at the first floor and another 6-in. set-off at the belfry level, so that the XIVth-century top had 3-ft. walls. The expense of doing the work was less than two-thirds the cost of rebuilding.

If one could successfully renew or make good a portion of a wall measuring, say, 2 ft. each way, and one slowly carried this process on, in time the whole would be new. They must not think that it was necessary to

Sutton-on-Trent Tower, repaired.

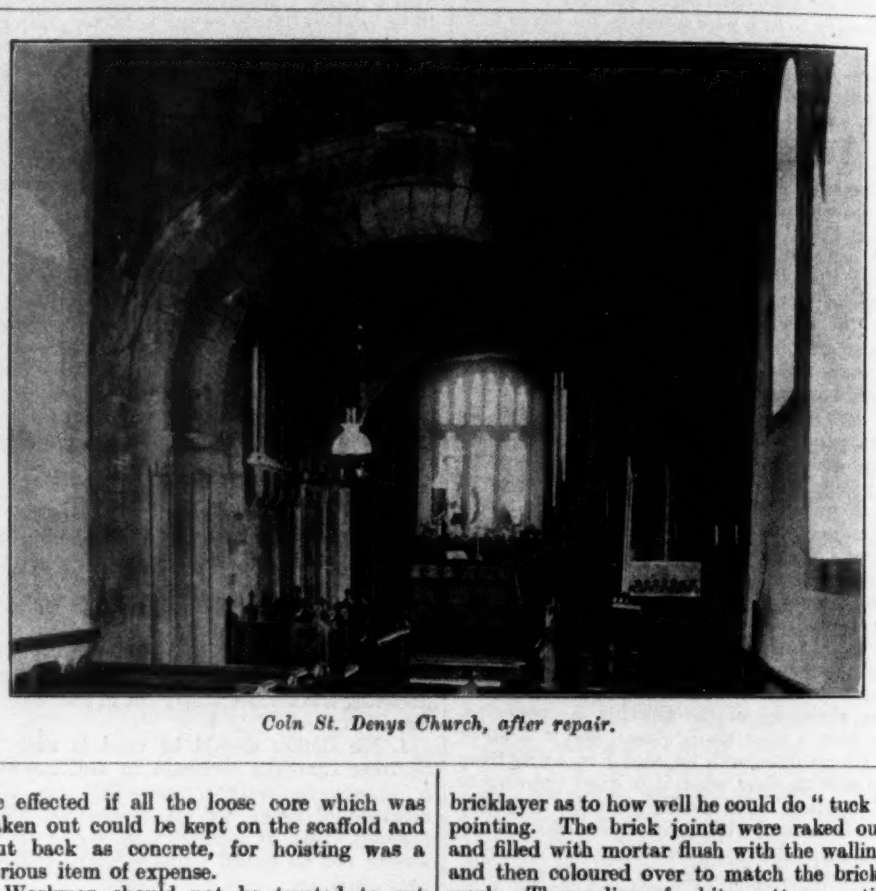
renew the whole. Some was always good enough to strengthen and retain, and they should remember that the whole of the original work outside was kept as the original builders left it, with the exception of the bulged face, which had to be rebuilt.

The process of taking out old work and putting in new could only be properly learnt by seeing it done, and our present knowledge is the result of many years of effort and experience. One knew that the Romans were very good builders and that one of their methods of building was to have a band of tiles the full thickness of the wall alternating with a band of concrete. When repairing walls we bear this in mind. The bands of tiles or bricks bind and the concrete consolidates. Cost cannot be ignored, and it would be seen that a great saving could be effected if all the loose core which was taken out could be kept on the scaffold and put back as concrete, for hoisting was a serious item of expense.

Workmen should not be trusted to cut into an old wall for the purpose of repair without supervision. It was essential for the proper carrying out of such work that a man should be in constant supervision over the workmen, and that he himself should have had previous training. Besides being a good antiquary so far as our English and Saxon buildings were concerned, he must have a clear head for construction and know all about building materials and their use. From this it would be obvious that the repair of buildings cannot be properly directed from a London office, and a specification for the repair of an ancient building was an absurdity.

He next referred to Sutton Courtenay Church in Berkshire as an example of a beautiful building requiring repairs such as would ordinarily be found to be needed. The tower was Norman work, and it, like Sutton-on-Trent Church, had had a XIVth-century belfry stage added. It had been plastered externally, but the weather had got behind the plaster so that it was only keeping the walls damp instead of protecting them. It was decided to point the walls and not replaster them.

In the matter of building few things were more important than the treatment of wall surfaces, and any man undertaking the daily supervision of building work ought to take a trowel and learn how to point different kinds of walling. To begin with, the old mortar ought to be cut out of the joints for at least as far back as the joints were wide. Before pressing in the new mortar the joints ought to be thoroughly washed out, and if the work was to be of any use the mortar must really be pressed in, and not wiped on the surface in the usual way. Anyone who took an interest in building would have noticed the wonderful variety in the different kinds of modern pointing, and he thought he might safely say that every one of these was bad. For example, what could be more foolish than to put on a raised joint? The wet hangs on it, and the frost gets hold of it. It took a long time to do, and, like all unconstructional methods, was very ugly when done. Could anything be much more silly than "tuck" pointing, and yet it was very difficult to do, and it might be taken as a good test of a modern bricklayer as to how well he could do "tuck" pointing. The brick joints were raked out and filled with mortar flush with the walling and then coloured over to match the brickwork. Then a line of white putty, or, still worse, it might be black putty, about ¼-in. wide, was run on all the joints so as to make-believe that the brickwork was very accurately built with fine joints. Good pointing would always be flush with the wall face, and the best result was obtained when the joint was finished as the wall was built, but unfortunately this was not often possible, because a new wall stays wet for a long time, and if frost came before it was dry the mortar in the joints would crumble away, and then the joints must be pointed. The cost in this case was much greater, for there was no difficulty in raking out the joints when the mortar was fresh, whereas if one paid for the joint being finished as the work proceeded and then had to pay for raking it out after the frost and pointing it, especially if the scaffolding had been removed, obviously considerable expense would be incurred. The real difficulty came in when a stone wall built of irregular stones with irregular surfaces had to be pointed. It seemed to him that the old builders did the best thing. They threw the mortar on, and then scraped it off even with the projecting stones. With bad mortar no good work could be done, and one would never have bad mortar if one used four or five parts of washed river sand and one part of blue lias lime. All good mortars were what was called "short"—that was, they were not sticky, and they fell off the trowel like wet sand when first mixed, but this would be rectified by mixing it beforehand and using it just as it began to toughen. It was well known that blue lias lime was slow in setting, and therefore it should be kept moist by the use of a garden syringe for a couple of weeks after the work was completed, and if a cloth could be hung over the work so much the better, for it would keep the wet from drying out.



Coln St. Denys Church, after repair.

The chancel arch of Sutton Courtenay Church was badly twisted and cracked. It was found that the foundations had given way on the south side, which had caused a dislocation of the wall on each side of the arch. The first thing done was to secure the arch with a strong wood frame, so that no movement could take place during the progress of the work. The loose earth was then removed to a depth of 6 ft. below the wall, at which level a firm bottom was found. A new wall was built up under the old wall and wedged firmly under it. The crushed wall was then removed piecemeal and replaced with new work. Over the chancel arch there is a fine coat of arms of King Charles painted direct on the wall. Of course, this had to be preserved. As it was desirable to relieve the arch of the weight of the wall above it, a lintel or beam of brickwork was built into the wall from the chancel side. This was done by the same process of doing short lengths at a time and leaving toothing on the end of each length, so that the next length, when built, could be bonded on to it. This was successfully done without disturbing the plaster on which the Royal arms was painted. As blue lias lime sets slowly, Portland cement was used for the new brickwork, as there would not be time to wait for the lime to set. On completion the brickwork was covered with smooth hand-trowelled plaster, similar to the old and lime-whitened. Paintings were found on the plaster under the whitewash in different parts of the church, among others a painting of St. George and the Dragon on the north wall of the aisle near the north doorway. There were other works done, such as mending the floors, roofs, and glazing.

The lecturer then referred to the work done at the interesting little Gloucestershire Church, Coln St. Denys; Onibury Church, Shropshire—a good example of a church which had been repaired and made structurally sound and fit for Divine worship without loss of interest; and West Walton Church, near Wisbech, Norfolk. It had been very usual when repairing such roofs as West Walton Church to take the lead away and put new milled lead in its place. The late Mr. Crickmay told him of a case where a church had its north and south aisle roofs covered with cast lead in bad repair. One aisle was renewed with milled lead and the other was left. This was when Mr. Crickmay was a young man, and he saw the church in after life, and the new milled lead roof was in a worse state than the cast lead one which had been left alone. Milled lead was made into sheets by crushing it between rollers until the desired thickness was obtained. This hardened it and made it brittle and liable to crack. Moreover, age turned it black, whereas lead which was cast into sheets became silvery, for it oxidised, so that the surface got covered with white lead. He had seen old cast lead looking almost as if it had had a coat of white paint on it. This oxidisation, he believed, acted as a preservative. When repairing timber roofs it was a great gain to repair them *in situ*. Each timber was examined, and the portions which were decayed were cut away and new oak fitted on to take the place of what had gone. There were many ways of splicing wood, and the splice should be so arranged as to cut away as little sound wood as possible from the old work. The worm in old oak could always be killed by saturating the oak with paraffin.

There was one important thing to remember when repairing roofs, which was that one could hardly find one's self in a difficulty, because if the carpenter could not see his way to make a sound and strong job of the work the blacksmith would be able to do so. In one case, for example, where timbers were not sufficiently strong, he cut a groove all down the back of them and then laid a T iron joist on the back, out of sight, and with the flange of the T iron let down into the groove. Coach screws were then put in on each side of the flange to hold the steel joist firmly on to the timber. Apart from this, however, timbers could be strengthened by fishplates.

Other buildings repaired and referred to and illustrated were West Stow Hall, near Bury St. Edmunds, and West Ham Church tower. A great deal had been written, said, and done on the preservation of wall paintings. In England they were never frescoes, *i.e.*, paintings on wet plaster, or tempera, *i.e.*, paintings with yolk of egg, but always true distemper paintings, the colours being used just in the same way as we use them now when distempering our walls. The one thing which one must not do was what had so often been done, and that was

West Stow Hall, Bury St. Edmunds.

varnish them. When first done it seemed most satisfactory, as it fixed the loose colour and brought the colour out. But it kept all gases and moisture within the wall and plaster, with the result that eventually the whole painting, varnish and all, came away, and the picture was lost. In most cases the best thing to do was to spray on a little weak size, or the fixative used for setting chalk drawings; but if the work was an important one they should read Professor Church's writings on the subject, and they would be safe in following his advice.

He had taken a large number of church towers as examples because they were structurally the most difficult to repair, for the greater the weight the greater the risk of interference. The reason so many church towers were out of repair was that foolish people in their ignorance drove wedges between bell cages or frames and tower walls when the cages needed tightening, and so the bells battered the walls down, whereas their thrust should be taken by the spring of the wood cage.

At West Ham Church an independent or double scaffolding was used. Instead of having one row of poles planted round the building and cutting holes in the walls, as must be done to carry the ends of the cross logs, which the poles did not carry, there was also a row of poles next the wall, so that the poles carried both ends of the logs on which the planks were laid, and the wall was left untouched and free all over for the workmen to work on. This tower was found to be a substantial building, but it was faced with Kentish ragstone, which was particularly bad for standing the corroding influence of town atmosphere. The acids had eaten the face of the stone away and had attacked the joints the worst. The walling looked almost as if it was built of decaying boulders Now, the way buildings in such a condition had been treated in modern times had been for the architect to take much trouble to find out a good durable stone, and to specify that all the old facing stones should be cut away and substituted by new facing stones of the approved stone. Westminster Abbey, for instance, had been so faced many times over. The new stone facing, which was done under the direction of the late Mr. Pearson, was at the present time sadly decayed. This method was, he maintained, the wrong one, because cutting out the old stone jars the building badly, and so did it harm; because one could not get a new stone bedded in all round so as to become part of the wall like the old stone was; and because one lost all the interest which was left by the original builders; and, after all, the new stone would decay like the old unless protected, so why not keep the old stone and repair and protect it? We now knew that stonework which was covered with lime could not be eaten into until the lime was first eaten through; we also knew, thanks to Professor Church, that many stones which were decayed could be again hardened by the use of baryta. What was done to these walls was to clear out the joints to a good depth, cut away the decayed stone each side of the joint, and wedge ordinary

West Stow Hall, after repair.

hand-made roofing ties into the joint, leaving the edge of the tile nearly flush with the wall face. Then pieces of tile laid flat were built in, in mortar, above and below the joint, and finally the whole was flushed up with mortar level with the face. Where stones had over their whole surface decayed back behind the wall face they were faced with tiles built like bricks, and the tiles allowed to show.

The reasons they always used lime instead of cement were that if one cut into old work where cement had been used one would find it as hard as flint, but not homogeneous with the old work. One would also notice where it had been used for pointing that it frequently came away. He did not say that it was impossible to use Portland cement properly, but the risks of failure were much greater than when using lime; and blue lias lime gave better results than ordinary lime because it continued to harden for many years. It could not, however, continue this process unless it could obtain plenty of moisture at first. For this reason hand-made tile was a particularly good material to use, because it held water like a sponge. The bricklayer, when repairing joints in the manner he had described, should have his mortar on one side of him, which should be composed of washed river sand 5, blue lias lime 1, and a pail of water with broken pieces of tile soaking on the other side of him. Besides his trowel he should have a pair of pincers with which to break the tile to the right size, and a brush with which to throw water into the joint before beginning and in order to moisten the work which had begun to set. No mass of mortar should be more than 1 in. thick without having a piece of tile in it.

North Stoke Church, Berks, under repair.

The lecturer then referred to the repair of, and showed views of, Wilby Church and Hall, Norfolk; the tower of Denton Church, near Grantham; North Stoke Church, Berkshire; a view of the ruins of the Palace, Bishops Waltham, after repair; a view of Marton Church tower in Lincolnshire; the garden front of St. John's College, Oxford (repaired by Mr. Redfern). The work of repair in this last case had been done by filling in the joints and making up decayed stone with tile and mortar as already described, but one new method was introduced. Where stonework, such as mullions, had decayed badly, holes were drilled into the stone and pegs of tile set in the holes so as to give the mortar a hold on to the face of the stone. Where stones had split they could often be jointed by drilling holes opposite one another into each stone and setting a peg of slate or gunmetal between the two. On no consideration should iron bars, clamps, or dowels be used in stone or brickwork. He was at the present time repairing Cobham Hall in Kent. There were two brick pinnacles which he thought had certainly been shattered by lightning, and which now turn out to have iron rods up the middle of them. For all such purposes copper or gunmetal should be used. If one look at the Horse Guards and other buildings of the same date one would see how the stone facing had broken, and this was due to iron clamps, which were built in, having expanded by corrosion.

In conclusion, the author referred to the work of repair at the Town Hall, Cirencester; Wyford Church; Middon Hall Church, Suffolk; and Clay Church, Norfolk.

Mr. M. Pocock, Past-Master, said that this was the last of the present series of lectures—a series given by the Company because they considered it to be their duty to do all they could to further their traditional trade. In the old days the Company used to educate many hundreds of apprentices, and there had been a good deal of discussion lately as to introducing the system again; but apprenticeship in the old form was, in his opinion, impossible. In the old days a carpenter would do everything connected with his trade, and an apprentice would learn everything connected with his trade by being apprenticed to one man; but now to teach him carpentry he would have to be apprenticed to thirty or forty men; and so with other trades. Another point of view was that youths were forced, and he did not think that a young man of sixteen or seventeen should be forced to serve a master for seven years. He did not think it possible, therefore, to bring back that system any more than to re-establish the old monasteries. It was very desirable, however, to carry on the tradition of the trade and to give those who followed it a chance, and that was the reason for these lectures, which were free and which the Company hoped would be of use. As to whether the Company would continue them next year he could not say, but he hoped they would. The Company desired to educate in the traditions of the craft, the traditions of carpentry and building.

A vote of thanks to the lecturer having been agreed to, the proceedings terminated.

[The photographs from which our illustrations are reproduced were taken by Mr. W. Weir.]

THE SURVEYORS' INSTITUTION.

A MEETING of the Surveyors' Institution was held on Monday at No. 12, Great George-street, Westminster, S.W., when Mr. T. A. Dickson read a paper on "The Report of the Royal Commission on the Poor Laws and the Relief of Distress." In the course of some remarks on distress due to unemployment, he said the Commission devote Part VI. of the Report to it. The first chapter of this part of the Report is devoted to a review of the historical developments since the passing of the Poor Law Amendment Act, 1834, and of the more prominent existing industrial conditions, which shows that the problem to be dealt with now is far more complicated than that of 1834. The Commission conclude their survey of social and industrial developments with the following passage:—

"Whilst the moral causes contributing to pauperism and unemployment remain much the same as before, the material influences regulating employment and industry have changed both in their character and scope. Forces have come into operation affecting employment, its regularity, its cessation, and expansion, which are quite beyond local control. Cyclical fluctuations now are worldwide in their effect upon industry and its employees. Changes in methods of production follow one another more rapidly than heretofore, and as specialisation becomes more marked and definite, those habituated and trained to the processes that are superseded find it more and more difficult to obtain occupation elsewhere. Trade unions and employers' organisations have in response as it were to one another succeeded the one in raising the standard of wages, the other the standard of industrial efficiency. Those who are not in the prime of life nor in positions of adequate physical strength or competency are apt to fall out of an industrial system which is above their level. There is also a large amount of work which partakes more of the character of personal service than of industrial production, such as that of errand boys, newspaper boys, telegraph boys, street sellers, occupations which, though remunerative for the time being to those engaged in them, have a tendency to cease at adolescence. A considerable proportion of those so occupied early in life become subsequently either unemployed or under employed and swell the ranks of casuality. Casual and other occupations giving intermittent employment engage a large proportion of the wage-earning class—possibly a larger proportion than heretofore—and the ranks of those seeking this form of maintenance are periodically swollen by those who have lost or proved their unfitness for a regular or skilled occupation.

These are modifications and developments in our industrial system which cannot be ignored and their products and wreckage, when either out of employment or in distress, require a treatment more elastic and varied than the simple method which eighty years ago was sufficient to cope with able-bodied pauperism in agricultural districts."

The Commission proceed to show that so far as the great mass of the wage-earning classes are concerned there is a marked improvement in their condition now as compared with that of 1834. Wages have risen, working hours have been reduced, and the cost of living is diminished. The improvement is also evidenced by the returns of the benefit societies and the savings banks, the deposits in the latter having increased during the last fifty years from 29,000,000*l.* to 209,500,000*l.* With this general improvement able-bodied pauperism has certainly diminished, but the decrease has taken place more in the country districts than in the towns, so that it is not the country unions but those in the towns, more especially in the densely populated towns, which are feeling the pressure of able-bodied pauperism to-day. The modern difficulties of the unemployment problem are:—

(*a*) The problem of the casual and inefficient labourer;
(*b*) The problem of the efficient workmen displaced by causes beyond their control;
(*c*) The lack of sufficient information to enable administrators to differentiate in their treatment of these two classes; and
(*d*) The insufficient mobility of labour.

The Commission then proceed to deal in some detail with the four systems available for the relief of the unemployed able-bodied, viz.:—

(1) The Poor Law;
(2) Charity;
(3) Municipal relief works;
(4) The Unemployed Workmen Act.

CONGREGATIONAL CHURCH, LEEDS.—The Congregational community in the Sheepscar district of Leeds have built a new church. The building, which has been raised from the designs of Mr. G. F. Darby, is of brick, with stone dressings, and is two stories high. On the ground floor is a schoolroom that will seat 400, and above it a mission-hall and gallery, to seat 500. Part of the hall and schoolroom can be partitioned off for classrooms; there are, in addition, two other classrooms, an infants' room, and a women's-room. The total cost is about 3,070*l.*

THE CONCRETE INSTITUTE: VISIT TO PARIS.

THE deputation of members of the Concrete Institute have returned from Paris, where they have been making a special inquiry into the durability of reinforced concrete. For this purpose visits were paid to about a dozen important structures in and near Paris, including bridges, culverts, tunnels, reservoirs, and buildings, all of reinforced concrete. These were of various ages, the oldest being the roof of a large house constructed no less than fifty-eight years ago by the late M. Coignet.

The programme of visits was arranged by Professor Rabut, the Chief Engineer for New Works of the French State Railways The deputation were specially invited to dine with the "Association des Ingénieurs des Ponts et Chaussées." In the absence of the President the visitors were received by M. Colson, Membre de Conseil de l'Etat.

The visitors were also entertained by the "Chambre Syndicale des Constructeurs en Ciment Armé," whose President, M. Edmond Coignet, is a son of the inventor, and by M. Hennebique.

The deputation consisted of Sir Henry Tanner, I.S.O., F.R.I.B.A., Mr. William Dunn, F.R.I.B.A., Mr. F. A. White, Mr. A. Ross, M.Inst.C.E., Mr. C. H. Colson, M.Inst.C.E., Mr. W. G. Kirkaldy, A.M.Inst.C.E., Mr. J. S. E. de Vesian, M.Inst.C.E., Mr. F. E. Wentworth-Sheilds, M.Inst.C.E., Mr. E. P. Wells, J.P., Mr. H. K. Dyson, Mr. H. K. G. Bamber, A.M.Inst.C.E., F.C.S., Capt. Gibson-Fleming, R.E., Mr. G. C. Workman, Mr. P. W. Leslie, Mr. H. Anderson, and Mr. P. M. Fraser, A.M.Inst.C.E. It is understood that the deputation were well satisfied with the results of their inspection, which will form the subject of a special report.

THE ARCHITECTURAL ASSOCIATION: SIXTH SPRING VISIT.

OLD buildings are not often included among the Architectural Association spring visits, but on April 9 a party of members enjoyed the privilege of being conducted over Westminster Abbey by Professor Lethaby. The Abbey has been so continuously written about from all points of view that any general description here is unneeded, but Professor Lethaby, in the course of his running explanation, gave expression to some interesting conclusions which may be set on record. Pausing first in the Eastern Chapels, he remarked on their points of resemblance in plan and construction to those at Rheims, which are so minute as to convince him that direct copyism is the only explanation. It is noteworthy that both Westminster and Rheims have always been Coronation churches, suggesting a reason for the remarkably spacious triforium galleries. The system of arch-ties in the interior was almost certainly intended to be permanent. The earliest ties (round the chevet) are of timber, the remainder of iron, built in at the ends in those first used, and the later ones hooked over staples. The expense of such large forgings, and the delicate shaping of the bars into central welded apices, lead Professor Lethaby to conclude that they cannot have been intended to be temporary.

The noble series of tombs round the Sanctuary and Confessor's Chapel could not detain the party long enough for detailed examination, but Professor Lethaby truly says that Westminster is richer in Italian mosaic than any church out of Italy. One likes to fancy the plain altar tomb of Edward I. characteristic of the man. The materials of which the Abbey is built are Purbeck marble for piers and vaulting shafts, Reigate stone for walling, and Caen stone for tracery. The vaulting has chalk filling with bands of Reigate stone every fifth course. Wren renewed the gilding and painted decoration of the Sanctuary vault with acanthus detail, but it is quite possibly on the general lines of the original scheme, since it resembles work of the period at Salisbury.

The glass in the three east windows is a patchwork of fragments—the only old glass in the church. The ancient glazing is fixed to wooden internal frames in stone rebates, entirely covered by the glass outside; this method Professor Lethaby believes to be traditional. It is surprising to find the lights in the clearstory as much as 4 ft. 6 in. in width, and in the transept 5 ft. 9 in.; dimensions which give an idea of the scale of the church. Some finely executed and well-preserved sculptured corbels, out of sight in the triforium, were pointed out in passing, and the XIIIth-century untrussed oak rafter roof (with internal trusses inserted by Wren) was all too briefly examined. Descending to the Chapter House, the fine tile floor was fortunately discovered open to view, and the interesting "wheel window" tiles were curiously observed. Professor Lethaby pointed out that some beautiful naturalistic carving in the spandrils of the wall arcade must ante-date similar work at Southwell by about fifty years.

In the newly-arranged Crypt Museum an interesting piece of reconstruction was seen—three arcade bays of the Norman cloister (*cir.* 1110) have been assembled and set up from fragments, by Professor Lethaby. One arch-soffit in the crypt shows well preserved Norman painted decoration consisting of a border of alternate black and buff checkers about 9 in. square enclosing double-lined red chevrons 3 ft. 3 in. wide. Much of the Norman work also shows checkers produced by alternate voissoirs of white stone and dark tufa. The remains of the funereal effigies of the English kings and queens from Edward III. to Henry VII. are now displayed in the museum.

A vote of thanks to Professor Lethaby proposed by Mr. Walter Millard was heartily given.

Fifty Years Ago.

FROM THE *Builder* OF APRIL 14, 1860.

METROPOLITAN COMMUNICATIONS AND STREET RAILWAYS.

THE Metropolitan Board of Works being now, pending the experiment, relieved from some of the duties of that great undertaking which was most pressing, it may be well to draw attention to certain objects for which the Board was constituted that are scarcely less important even than the sewerage, to the improvement, or, we might say, the preservation, of London. Facilities for intercommunication are more needed for this than for any other capital; but they are he e probably, the most out of proportion wi h local requirements and those of business; whilst the disposition of the routes and streets of London generally, is as unfavourable to effect, and to the beneficial results on health and mind which come from external impressions, as to the first-named objects of the planning of any accumulation of buildings. We are, of course, aware that the efforts to secure timely attention to the subject are not only those which we ourselves have made, and that the Metropolitan Board have under consideration a considerable number of new lines, such as had been proposed at various times; as well as that they have now commenced works like the new line of street on the Southwark side, and completed others, as the short street from King-street, Covent Garden, which may prove of great value in relieving the present crowded thoroughfares. That they are not actively doing what is sufficient to stop the pressure of difficulties and increasing evils, however, we may conceive is admitted by themselves; and they have achieved in preliminary arrangements comparatively speaking little beyond printing a schedule of requirements, and items of estimate for streets, and expressing regret at their want of funds. Tha the whole work of improved metropolitan communications is multiplied in costliness at every year's delay, and that it must be done, or the effects become at last very serious, or in a national point of view, has been said again and again. It is fully perceived by those who have thought on the subject The efforts of the Board, however, appear in print—or, may we say, are as plans—whilst companies are able to proceed towards the formation of railway-stations, in the centres of London, which may be useful as represented, in diverting traffic from particular lines, but which have never been considered in relation to the plans spoken of, nor the latter with the stations, and which, to say the least, will introduce in central localities a condition of things beneficial to the companies.

There ought to be therefore, on paper, a comprehensive plan of London and its suburbs, with the sites marked of all such stations of railways to the country, as are likely to be needed for some time to come, and with required street improvements suited to these centres, and to those of the markets, theatres, and other resorts of the ordinary carriage traffic.

FOREIGN AND COLONIAL NEWS.

WORKS IN CANADA.

According to *Industrial Canada* for March, the erection is to be begun this year of a technical school at Toronto, which is expected to cost more than 500,000 dollars (about 103,000*l.*). A naval college is to be built at Halifax, at a cost of 150,000 dollars (about 30,800*l.*), with barracks for staff, etc., costing an additional 200,000 dollars (about 41,000*l.*). A new wing is to be added to the Quebec Provincial Legislative buildings, at a cost of 250,000 dollars (about 51,400*l.*). The sum of 150,000 dollars (about 30,800*l.*) is to be spent on extending the Place Viger Hotel at Montreal by the addition of 100 rooms. The Yorkshire Insurance Company intend to erect a ten-story office building at Montreal, at a cost of 200,000 dollars (about 41,000*l.*); the architects of the building are Messrs. Saxe & Archibald. The Municipality of Saskatoon propose to expend 90,000 dollars (about 18,500*l.*) this year in waterworks. An incinerator is to be built in Vancouver, at a cost of 70,000 dollars (about 14,400*l.*).

BOMBAY SCHOOL OF ART.

New studios and laboratories which have been added, at a cost of about 100,000 rupees, to the School of Art buildings at Bombay were formally opened on March 24 by the Governor, Sir George Clarke. The structure has been erected with the object of bringing the materials and processes employed by the artistic craftsmen of India up to the level of the materials and practice of Europe, and of doing this by experimental work. In the laboratories research work and instruction will engage the attention of the professors, whose whole energies will be given to working out improvements in the materials and technical processes employed in such distinctively artistic industries as pottery and porcelain manufacture, the weaving of the finer classes of decorative textiles, and ornamental metal work. At the same time, in the studios a small staff of designers, potters, modellers, and painters, with a few selected pupils, will endeavour to turn to the best possible artistic uses these improved materials and processes. The new building, which is in the English Renaissance style, was designed by Mr. John Begg. The wheels and other machinery in the pottery section have been imported from England. Mr. Cecil Burns, the Principal, has under him a vice-principal and thirty-four lecturers upon design, architecture, and anatomy, besides assistant masters and clerks.

COUNCIL SCHOOL, BITTON, GLOUCESTER.—A new school has been built at Bitton by the Gloucestershire Education Committee. The buildings have been carried out to the design, and under the direction, of Mr. R. S. Phillips, Architect to the Gloucestershire Education Committee. The contract for the buildings was let to Messrs. Dimery & Sons, Berkeley; that for the boundary walls and playgrounds to Messrs. Adams & Jefferies, Oldland Common; that for the heating installation to Messrs. Skinner, Board, & Co.; and for the fencing to Messrs. J. Priest & Sons, Ltd., Bristol.

APRIL 16, 1910.

TO CORRESPONDENTS.

F. W. F. (too late; next week).

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N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

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MEETINGS.

FRIDAY, APRIL 15.

Society of Architects.—Twenty-sixth annual dinner, Holborn Restaurant, W.C. 6.30 p.m.

SATURDAY, APRIL 16.

Royal Institution.—Mr. W. W. Starmer on "Bells, Carillons, and Chimes"—II. 3 p.m.

Incorporated Association of Municipal and County Engineers.—Midland District Meeting, to be held at Lichfield.

MONDAY, APRIL 18.

Royal Institute of British Architects.—Professor W. R. Lethaby on "The Architecture of Adventure." 8 p.m.

Royal Society of Arts (Cantor Lectures).—Mr. A. B. Searle Ph.D., on "Modern Methods of Brick-making"—II. 8 p.m.

Architectural Association.—The 1910 Play, "Arctia, a Legend of the North," at the Royal Court Theatre, Sloane-square, S.W. 8.15 p.m.

TUESDAY, APRIL 19.

Architectural Association.—The 1910 Play (second night).

Guild of Architects' Assistants (Bedford Head Hotel, Bayley-street, Tottenham Court-road, W.C.).—Paper by Mr. E. J. Dixon, A.R.I.B.A., "Art, Architecture, and the Assistant." 7.30 p.m.

WEDNESDAY, APRIL 20.

Royal Society of Arts.—Sir H. Trueman Wood, M.A., Secretary of the Society, on "Industrial England in 1754 (the date of the foundation of the Society)." 8 p.m.

Builders' Foremen and Clerks of Works' Institution.—Quarterly meeting of the members. 8 p.m.

Incorporated Association of Municipal and County Engineers.—Irish District Meeting, to be held at the Institution of Civil Engineers, Dublin. 11 a.m.

THURSDAY, APRIL 21.

Royal Society of Arts (Indian Section).—Mr. J. Claude White, C.I.E., on "The Arts and Crafts of Tibet, and the Eastern Himalayas." 4.30 p.m.

The Concrete Institute (Royal United Service Institution).—Mr. S. H. Chambers, Engineer and Surveyor to the Hampton Urban District Council, on "The Effect of Sewage and Sewage Gases on Portland Cement Concrete." 8 p.m.

Institution of Electrical Engineers.—Mr. A. V. Clayton on "Hydro-Electric Installations of Sweden." 8 p.m.

FRIDAY, APRIL 22.

Royal Sanitary Institute.—Provincial Sessional Meeting, Leicester. The meeting will be held in the Council Chamber, Town Hall at 7 p.m., when a discussion will take place on "Purification of Leicester Sewage by Sedimentation Tanks, Single Contact Beds, and Broad Irrigation on Clay Land," to be opened by Mr. E. G. Mawbey, M.Inst.C.E., Borough Engineer and Surveyor, Leicester.

SATURDAY, APRIL 23.

Royal Sanitary Institute.—Visit to the Abbey Sewage Pumping Station, and the new Bacterial Works and Broad Irrigation at the Beaumont Leys Farm.

Royal Institution.—Mr. W. W. Starmer on "Bells, Carillons, and Chimes," with musical illustrations—III. 3 p.m.

Junior Institution of Engineers.—Excursion to Southampton for visiting the new dock works and the T.S.S. *Teutonic.*

Illustrations.

UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

THIS drawing was exhibited at the Royal Academy last year. The original scheme, selected in competition, we published in our issue of January 12, 1907; the plan, in execution, has been entirely recast. In place of one large quadrangle, there are now two, disposed, if we may so say, in échelon. To the left of the drawing is the museum and library block; behind this comes the rearmost quadrangle. To the right is the Arts block, containing students' common-rooms on the ground floor, while the first and second floors are occupied by class-rooms. The third, or top, floor of this block contains the professors' rooms; in front of the dormer windows is a small terrace. The entrance immediately to the right of the Museum and Library block is the men students' entrance, a similar entrance for women students being placed at the opposite end. The terrace in front of this block commands a most magnificent view. The materials are Cefn stone, with Precelly green slates for the roofing. The foundation stone was laid by the King in July, 1907, and the buildings are now nearly completed. The portion at present erected consists of the portion shown in the drawing and two sides of the quadrangle behind the Arts block. The Gothic feeling is more pronounced than in the original scheme, which partook more of the Renaissance character.

TUESLEY COURT, GODALMING.

THIS house is now nearing completion, and is situated on the slope of a hill with superb views to the south and west. The walls are constructed of Bargate stone from quarries adjoining, with window dressings, mullions, transoms, etc., of moulded red bricks. The chimneys and all the brick-work are of multi-coloured bricks from Kent. The roofs are covered with hand-made tiles from Hazlemere, and the gutters and down pipes throughout are of teak left untouched. The gardens and terraces, etc., have all been designed and laid out by the architect.

DESIGN FOR NATIONAL MUSEUM OF WALES.

IN planning the proposed building the conditions and suggestions of the Committee were followed as far as possible.

The south façade is similar in general outline to that of the Law Courts in order to ensure symmetry in the three buildings facing south (the Town Hall being in the centre).

The Museum is planned with the main entrance in Museum-avenue and another one at south of the building. The main entrance gives access to a hall and staircases, and thence to a large central hall, from which any department can be easily reached. Through this hall the main thoroughfare runs from south to north and from east to west. The Board and Committee rooms, also Director and his staff, are on the east side.

The Reserve Collections, the study-rooms for research, and the keeper's rooms are near the departments to which they belong.

The Sculpture Gallery, on the first floor over the entrance hall, gives access to the Art and Industry Departments. The Lecture Hall, also on the first floor in centre of the building, is immediately approached by the main staircase, with another stair-case on the opposite side. Each depart-ment in case of fire could be isolated by fire-resistance doors.

It is proposed to use that space at the east side of the site, not used for the building, as a garden treated architecturally with groups of sculpture, etc., as shown on the plans.

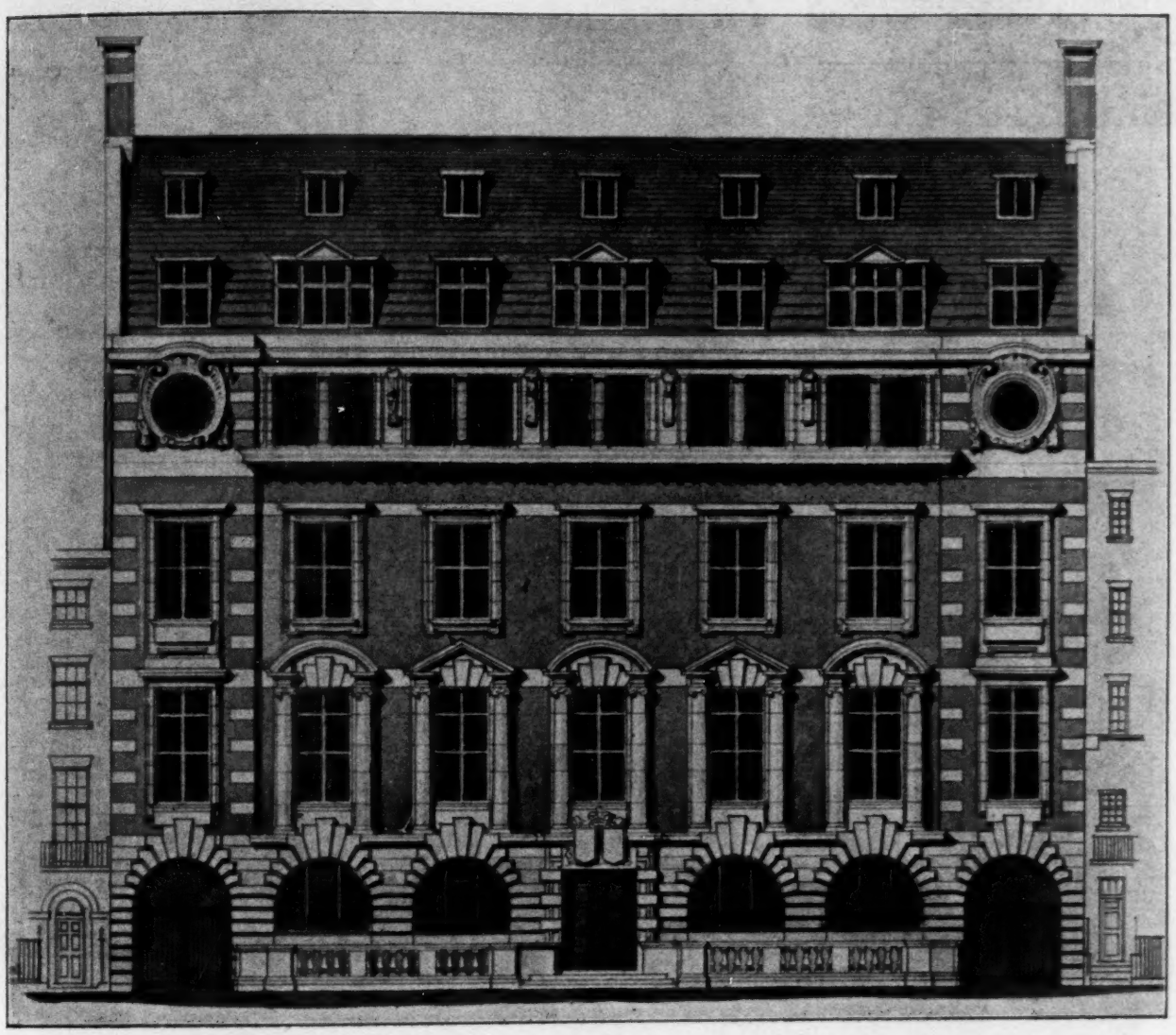
The building generally would be of fire-proof construction, the floors of an approved reinforced and fire-resisting system. All the four elevations, including the boundary walls, to be in best Portland stone. The floors to entrance halls and staircases to be in marble and mosaic paving; all other floors to galleries are to be in oak wood block. Doors, screens, etc., to be in hardwood, with fire-resisting glazing. The walls internally would have plain plaster treatment and the ceilings would have a plain beam treatment. The building is estimated to cost about 250,000*l.*

T. L. VESPER.

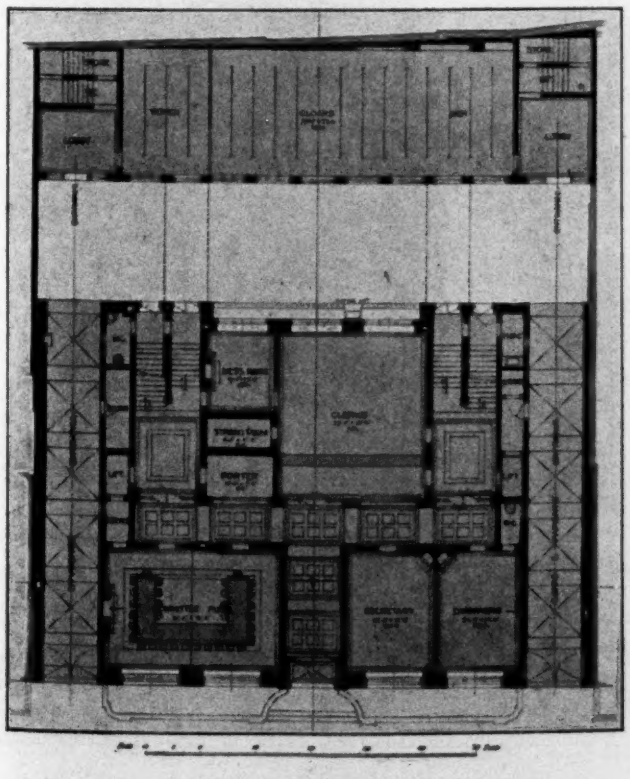
COMPETITION FOR THE NEW EXAMINATION HALL FOR THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS.

THIS limited competition was decided a short while since, and the selected design, by Mr. A. N. Prentice, illustrated in our issue of March 26. We now take the opportunity of making some furtner remarks on the schemes submitted. Mr. T. E. Collcutt acted as assessor; for the sake of greater clearness we will recapitulate his award: Mr. A. N. Prentice was placed first; the second premium, of 100*l.*, was awarded to Mr. H. T. Hare; the third, of 75*l.*, to Mr. E. Stanley Hall; and the fourth, of 50*l.*, to Mr. J. W. Simpson. The cost was not to exceed 23,000*l.* The examination-rooms, two for 175 students and two for seventy students, were to be placed in pairs of large and small on the first and second floors. Each of these rooms was to be provided with lavatory and sink; and to each pair of examination-rooms there were to be one large and two smaller waiting-rooms in close communication with lavatories attached. It will thus be seen that the arrangement of the first and second floors is identical. In the basement, "or elsewhere," to quote from the conditions, the cloakroom accommodation for 700 male and 100 female students was to be placed. The caretaker's quarters could either be placed here, or it might "take the form of a bungalow in the garden," an alternative not adopted by the authors of the premiated designs. The accommodation required on the ground floor comprised clerks' office, clerks' mess-room and lavatory, committee-room, examiners' room and lavatory, large entrance hall with division forming waiting-room for *viva voce* examination candidates (male and female), with separate lavatory and cloak-room accommodation. A private roadway was to be provided at the side and rear of the building for coals, stores, etc., to be delivered at the rear. For the candidates for written examinations two entrances were to be provided, either at the rear or in the side roadway. Patients were to enter by special side door in immediate communication with the passenger lift; three lifts were required, one for passengers, one for goods, and one small external lift for laboratory refuse. The third floor was to be devoted to anatomy, chemistry, and physics laboratories; the fourth to the Imperial Cancer Research Fund experimental laboratories; and the fifth to storage room for animals.

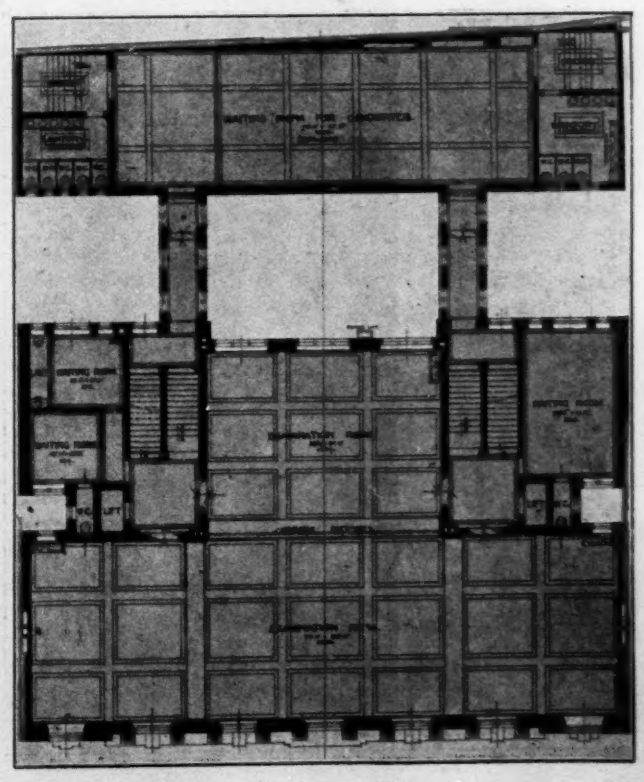
Mr. Prentice's plan was by far the most compact of any submitted. The ground floor contains all the accommodation which the conditions suggested for this floor, and at the same time ample circulating space is secured, without encroaching unduly on the garden at the rear. Other competitors, for the sake of a symmetrical plan, have arranged two side roadways, a procedure which has landed them in difficulties, inasmuch as sufficient space is not then left for the various departments required here. Further comment would be superfluous in this article, as our illustrations of March 26 give the plans of all floors. The elevation is a good



Front Elevation.

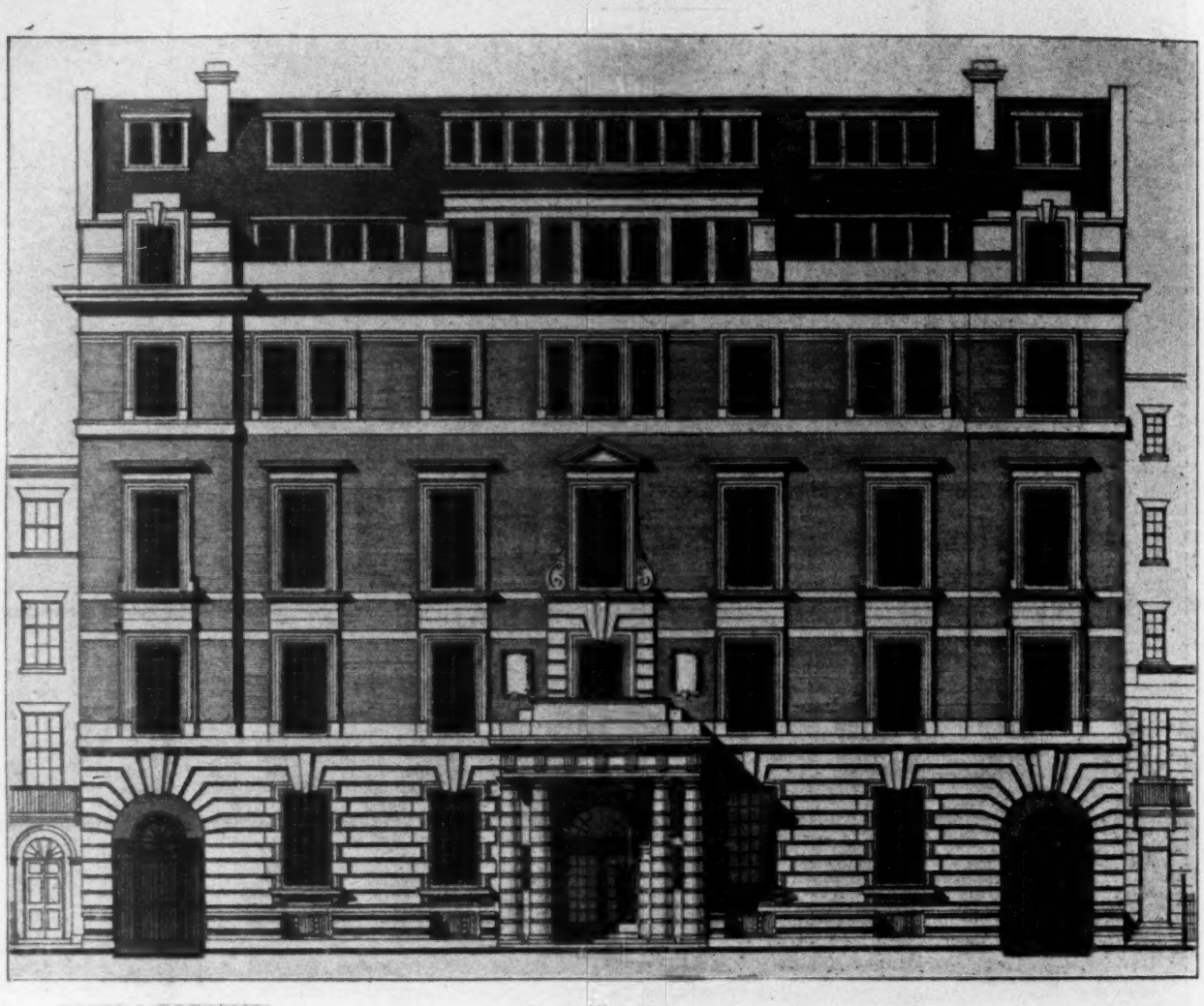


Ground Floor Plan.

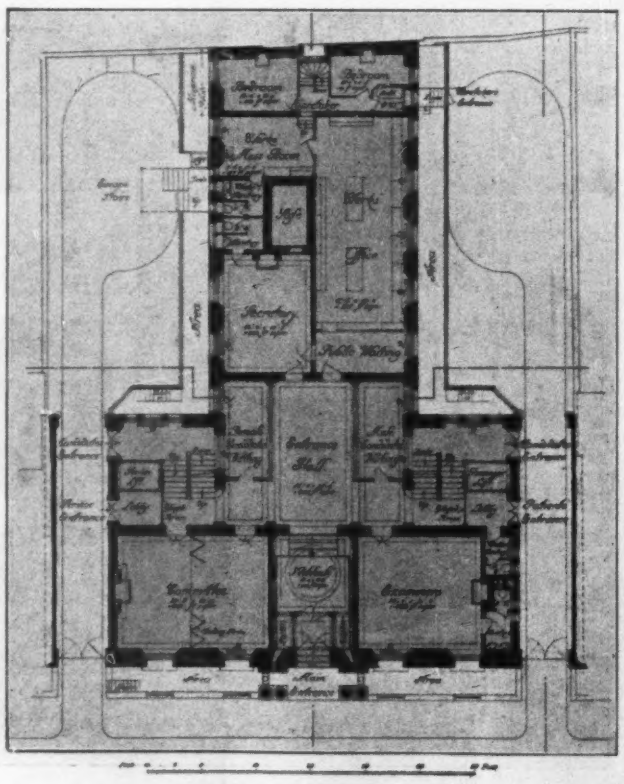


First Floor Plan.

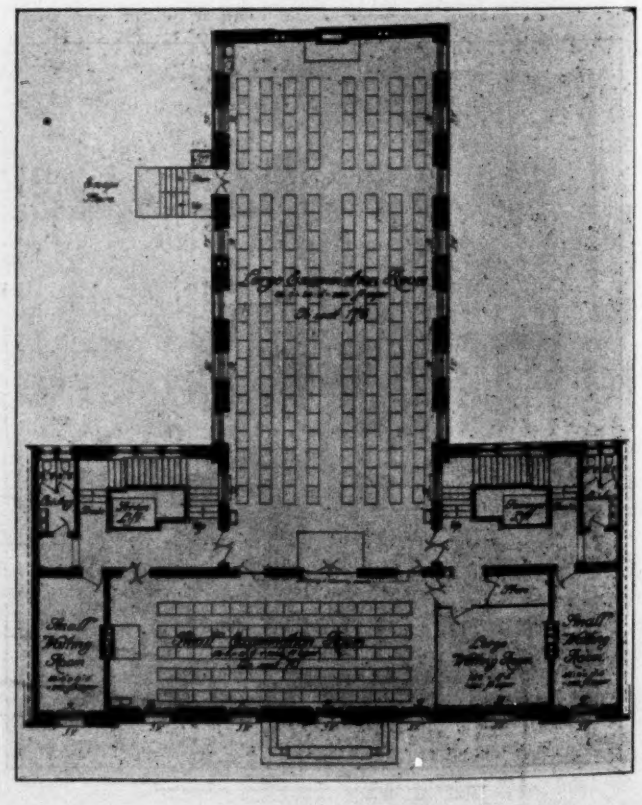
COMPETITION DESIGN FOR MEDICAL EXAMINATION HALL. By Mr. H. T. Hare.



Front Elevation.



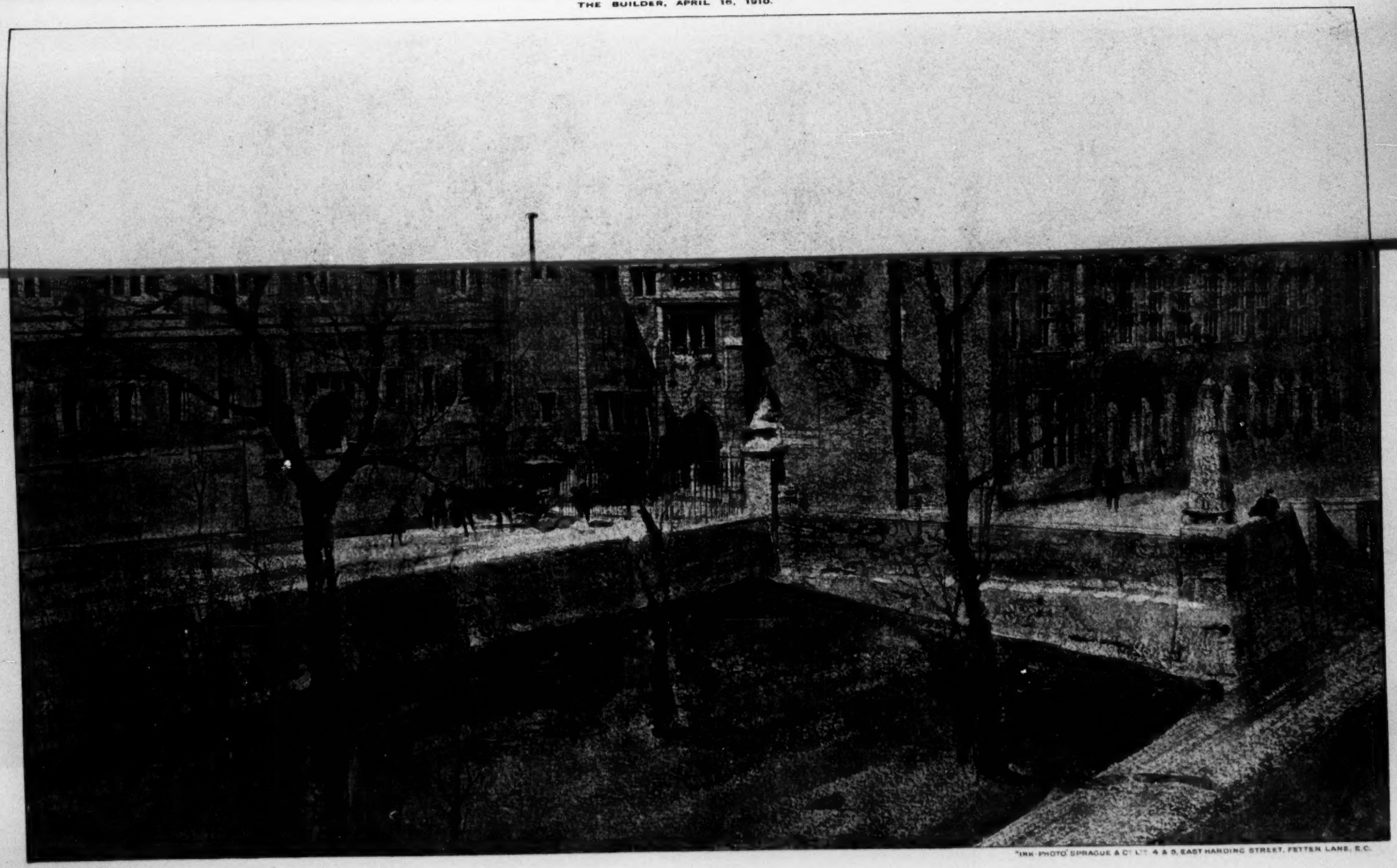
Ground Floor Plan.



First Floor Plan.

COMPETITION DESIGN FOR MEDICAL EXAMINATION HALL. BY MR. E. STANLEY HALL.

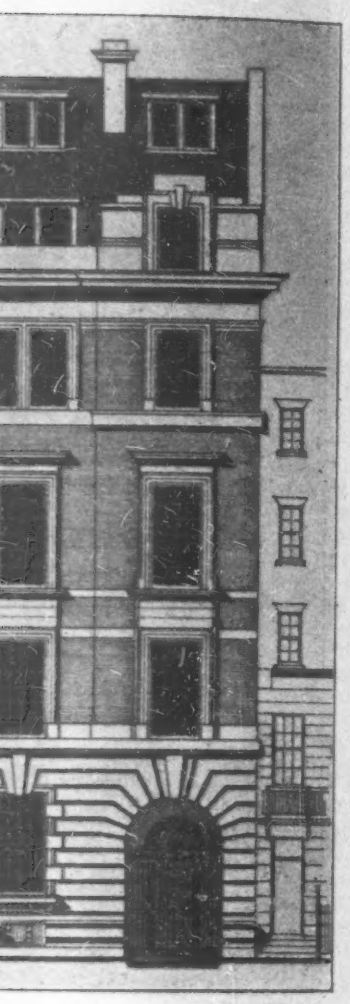
THE BUILDER, APRIL 16, 1910.

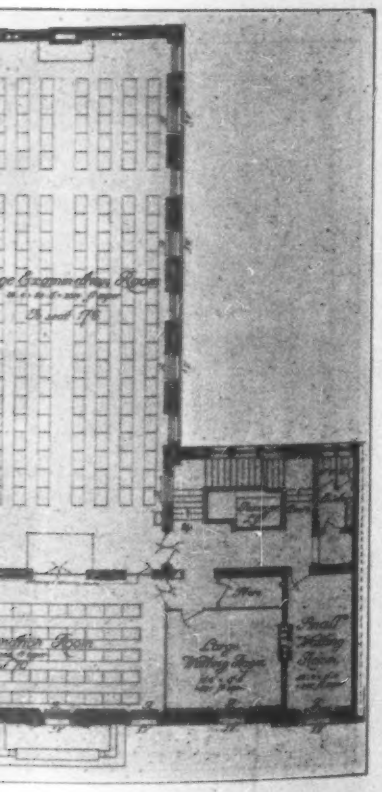


"INK-PHOTO" SPRAGUE & Co. LTD. 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

Royal Academy Exhibition, 1909.

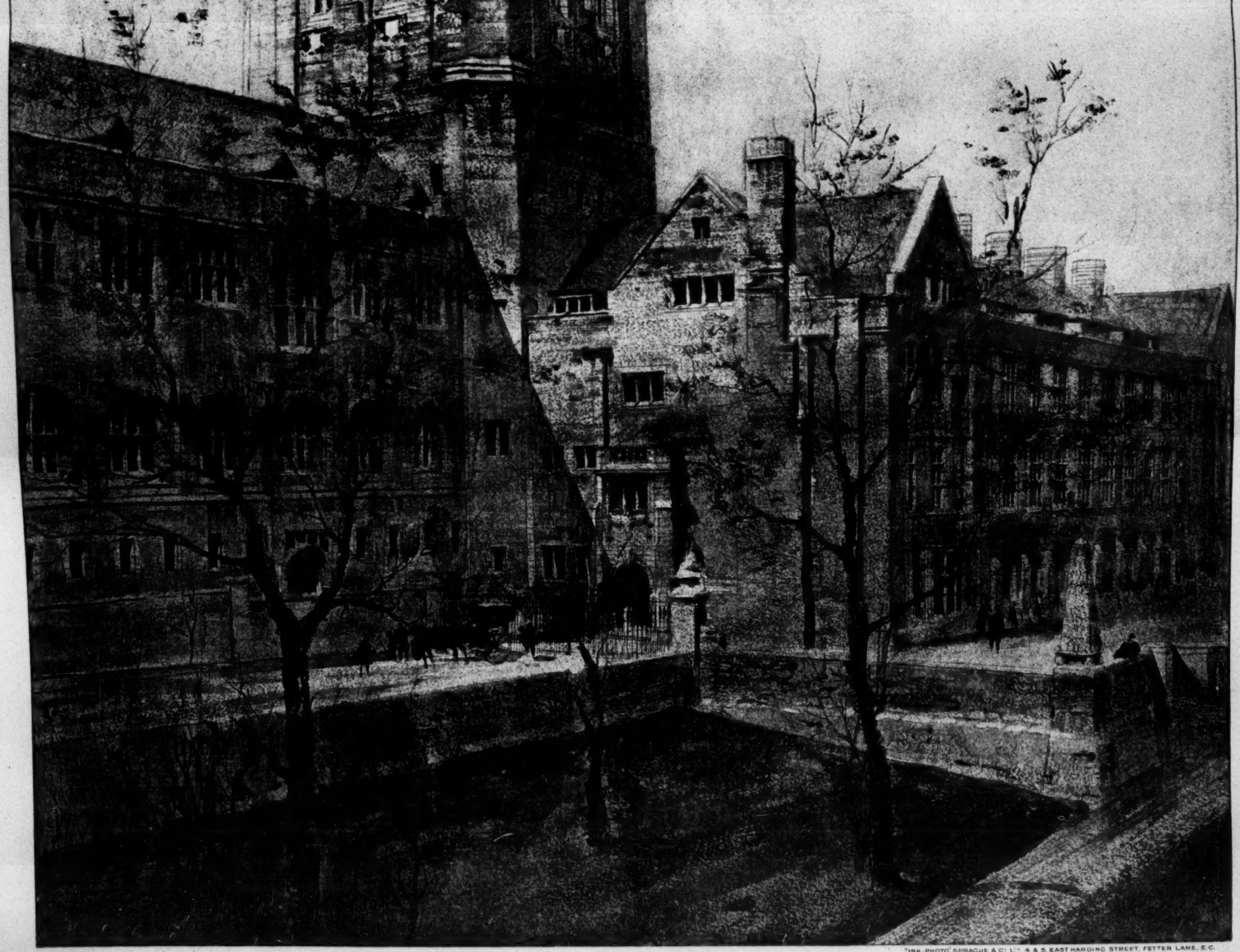
UNIVERSITY COLLEGE OF NORTH WALES, BANGOR—Mr. Henry T. Hare, F.R.I.B.A., Architect





rst Floor Plan.

E. STANLEY HALL.



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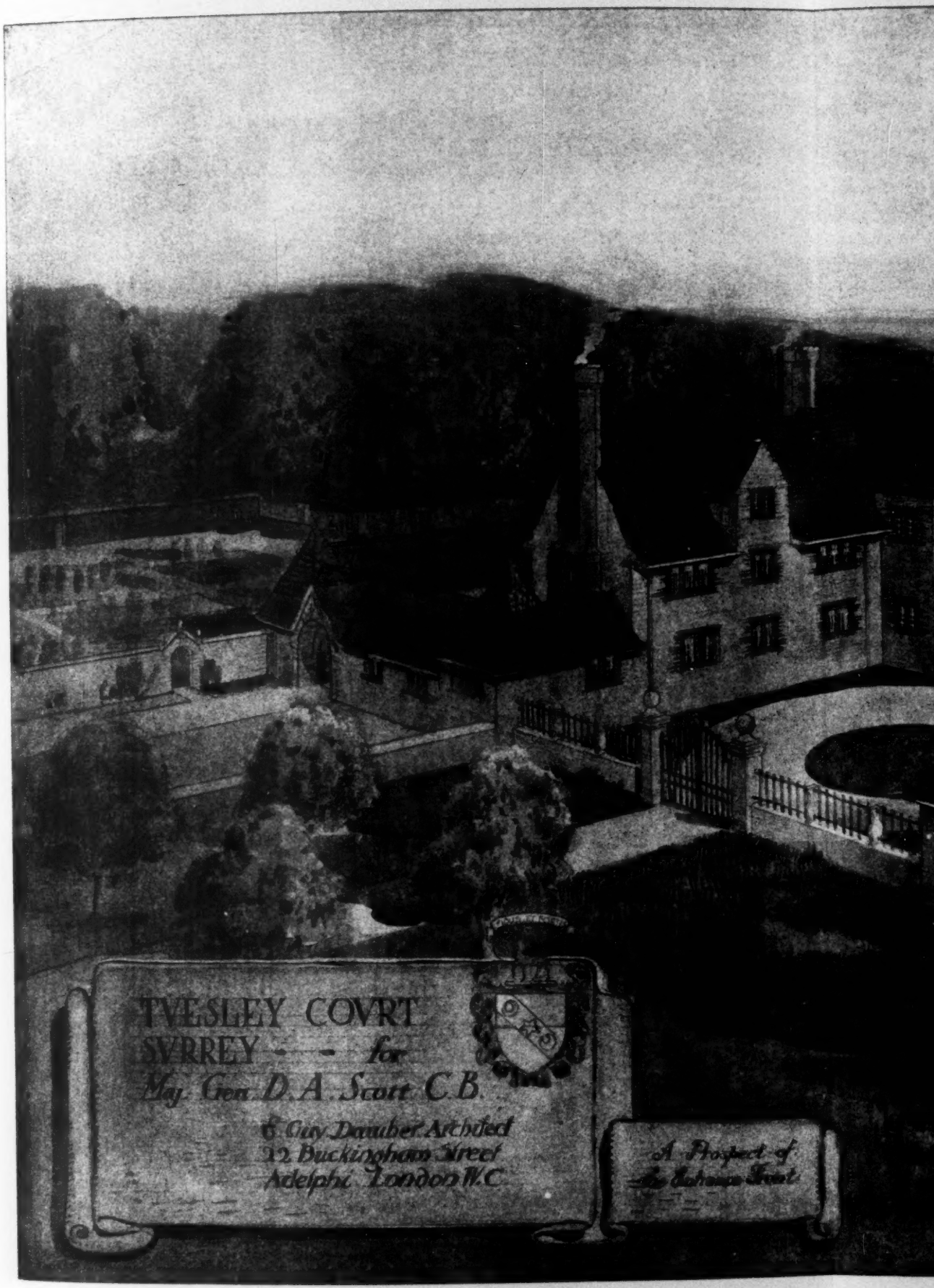
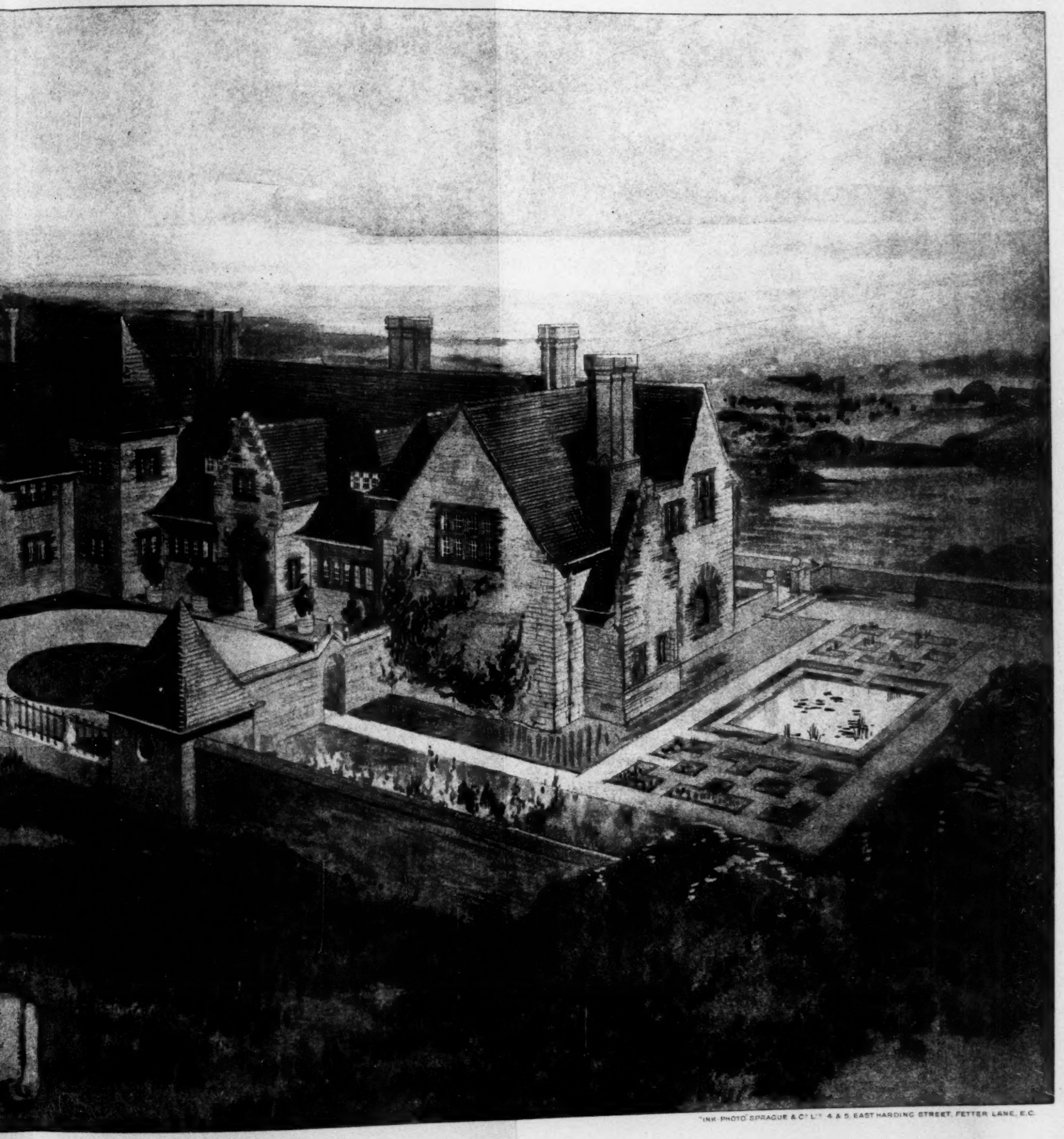
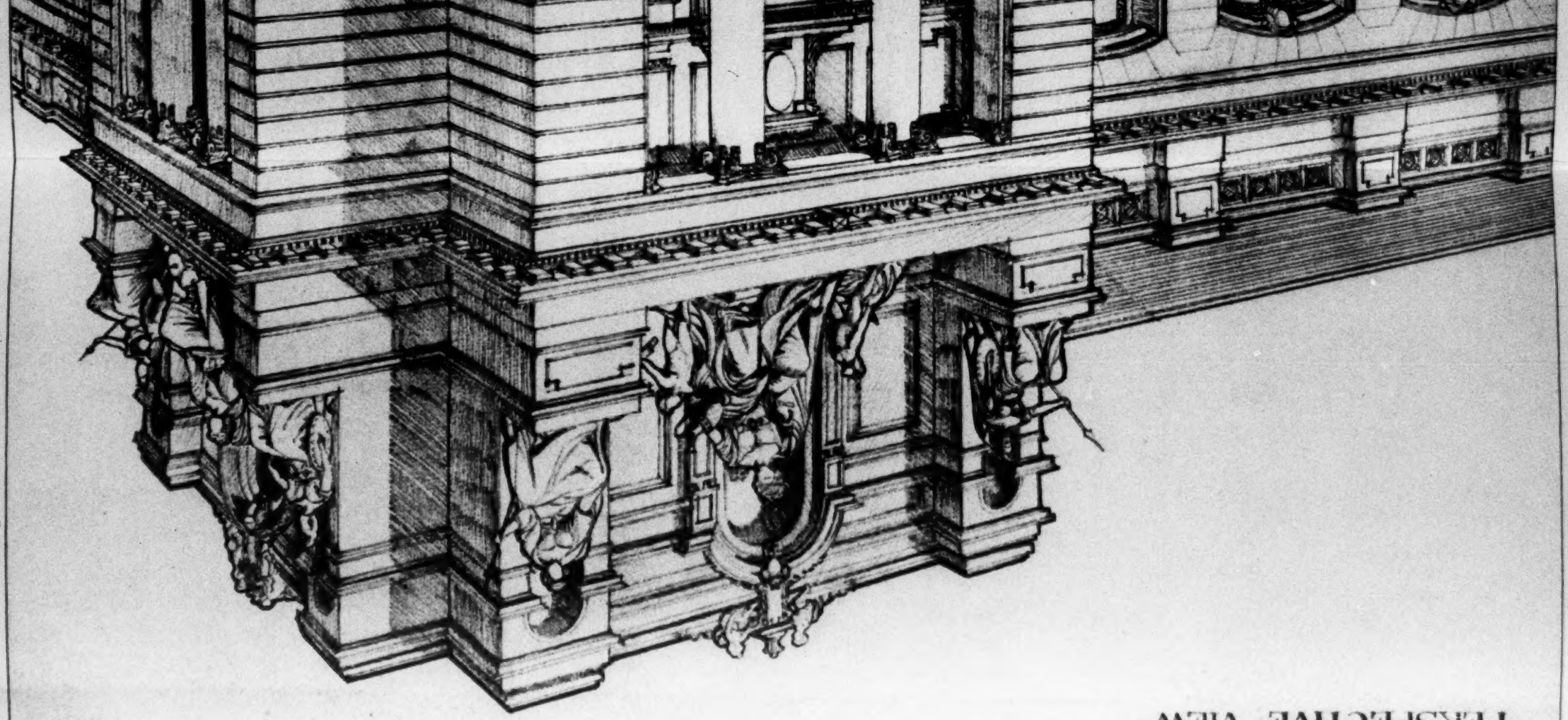


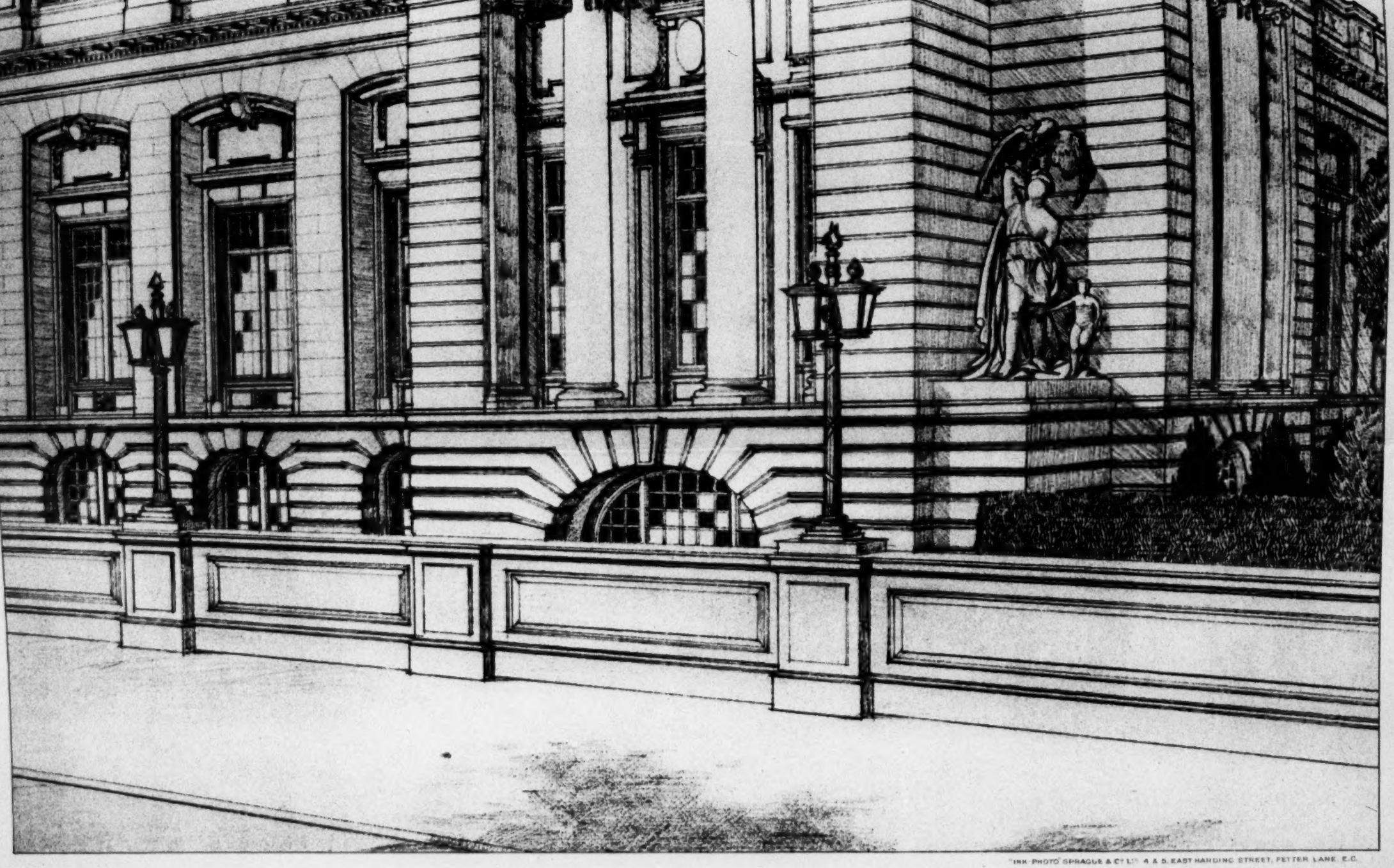
Royal Academy Exhibition, 1909



INK PHOTO SPRAGUE & Co LTD 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.



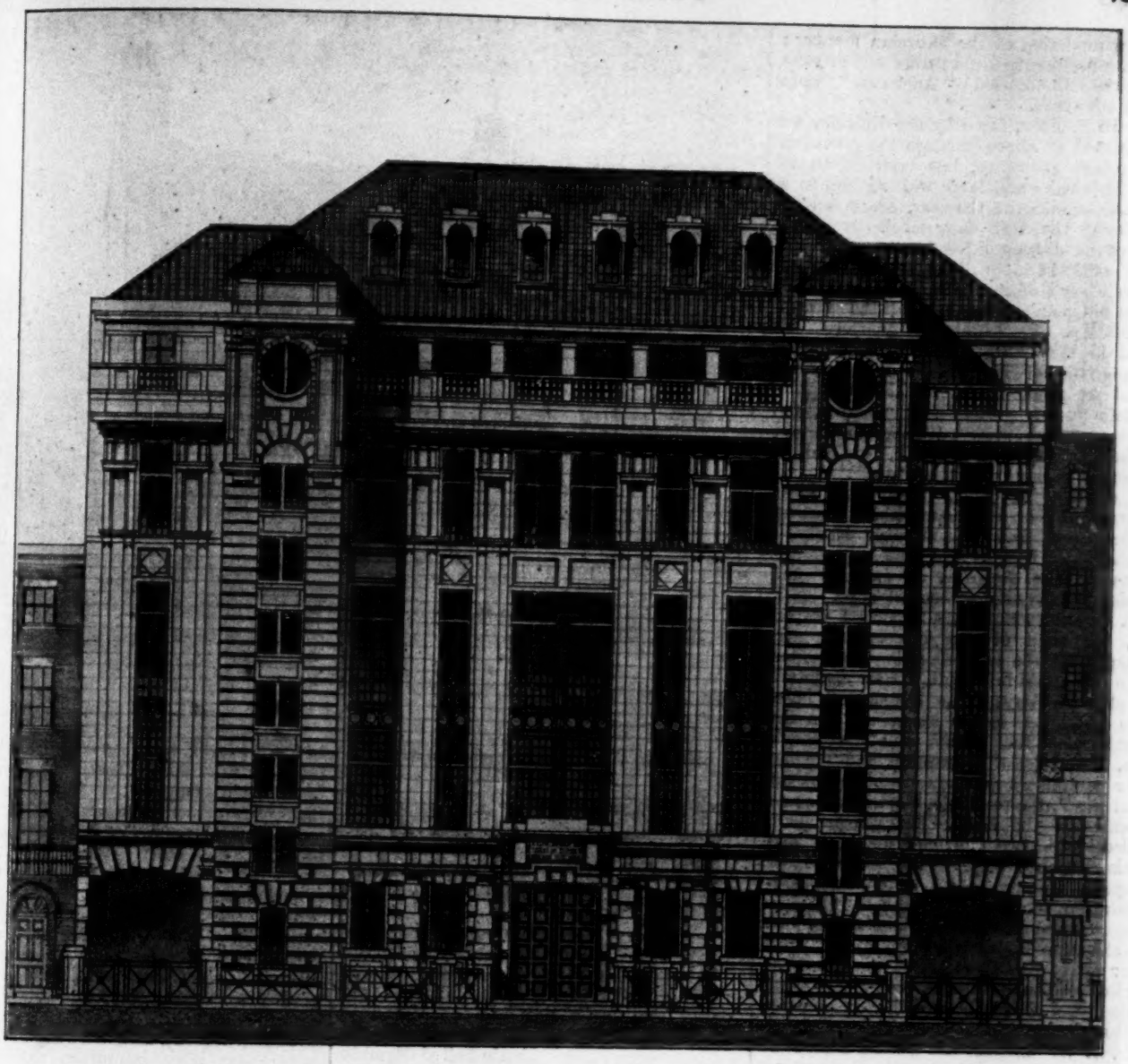
PERSPECTIVE VIEW.



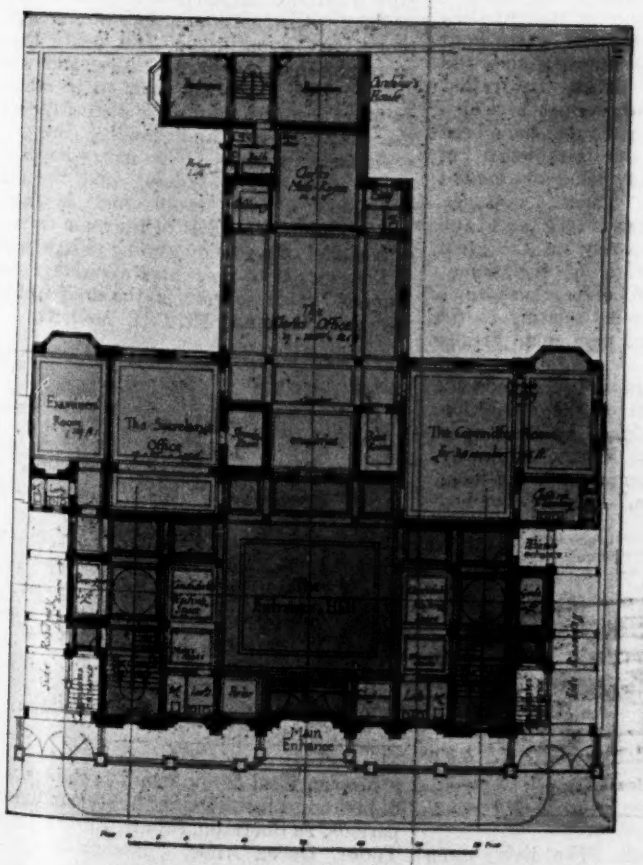
"INK PHOTO" SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

DESIGN PLACED SECOND FOR NATIONAL MUSEUM, CARDIFF.—By. Mr. T. L. Vesper.

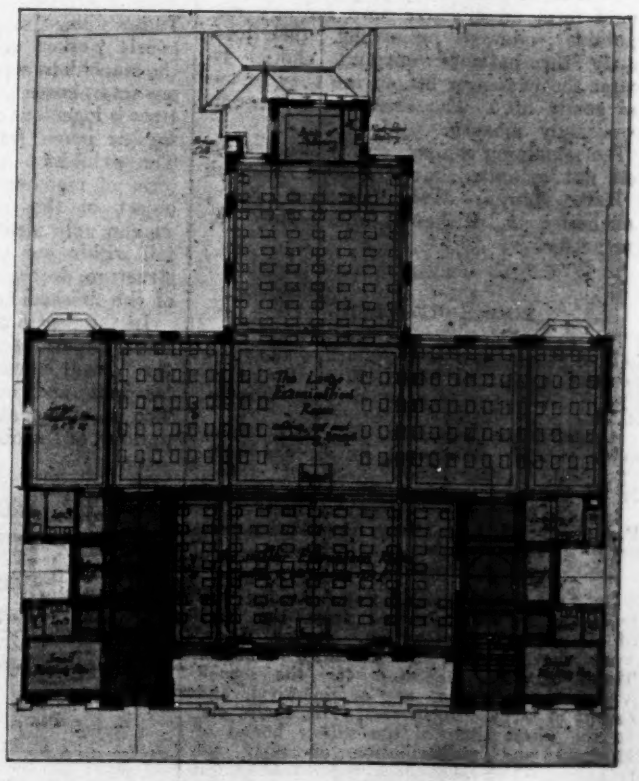
PERSPECTIVE VIEW.



Front Elevation.



Ground Floor Plan.



First Floor Plan.

COMPETITION DESIGN FOR MEDICAL EXAMINATION HALL. BY MR. J. W. SIMPSON.

modern rendering of the Georgian manner; the entrance seems to us rather out of tune with the pronounced "Augustan" note struck elsewhere.

Mr. H. T. Hare, faced by the difficulty we have hinted at above through the provision of two side roadways, has been driven to place his cloaks and large waiting hall in a separate building at the rear, connected by bridges at the first floor level. It might perhaps have been advisable to place the clerks' office in more direct connexion with the secretary's office. The remaining floors do not differ much from those of the selected design. The housekeeper's quarters are placed in the basement. The elevation is characteristic of Mr. Hare's manner; we do not see much reason for the ponderous voussoirs of the ground-floor windows, the arches of which seem sufficient to uphold a whole universe, but have, in reality, practically nothing but the sills of the first-floor windows to carry. The body room in connexion with the anatomical laboratory on the third floor is admirably insulated by the open balcony by which it is approached. The design is an excellent one in point of ingenuity and contrivance.

Mr. E. Stanley Hall has adopted a T-shaped plan, the head of the T occupying the frontage, and the tail occupying the garden at the rear to its full depth. Here again are two side roadways. The cloaks and lavatories are placed in the basement. On the ground floor the clerks' and secretary's office, with clerks' messroom and portion of the caretaker's quarters are placed in the tail of the T, the remaining departments and staircases in the head. The waiting hall, divided into two portions for male and female students respectively, seems rather cramped. On the third floor the body-preparation room does not seem in close enough communication with the service lift. The elevation is admirable up to the third floor; above this it seems to go somewhat to pieces. The nature of the departments on the upper floors, however, is responsible for this.

Mr. J. W. Simpson has worked somewhat on the same lines. Here again the waiting space is rather cramped, being arranged on the same principle as in the preceding scheme. On the third floor the flat by which access is gained to the body-preparation room would form an effective trap for any disagreeable odours proceeding therefrom. Surely the patients' entrance should be nearer the passenger lift, or are they to use the goods lift? The elevation is uncompromisingly modern.

The remaining competitors, whose designs were not exhibited, were Messrs. Warwick & Hall, Maurice Webb, Eustace Frere, Lanchester & Rickards, and Sidney K. Greenslade.

BOOKS RECEIVED.

THE SCULPTURES OF THE PARTHENON. Portfolio of Plates, with an Introduction and Commentary by A. H. Smith, M.A. Plates 92. Pp. 70. (Trustees of the British Museum. 5*l.* 15s.)

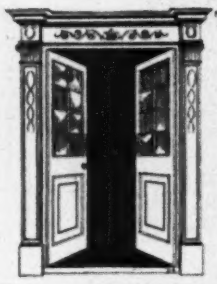
ANTIQUITY OF CREMATION. By A. C. Freeman, M.S.A. Illustrated by S. J. Nunn. Pp. 104. (*Undertakers' Journal* Office. 3s. 6d. net.)

LEAKE'S REGISTER OF INDUSTRIAL PLANT. By P. D. Leake, F.C.A. (Henry Good & Son. 5s. net.)

GRINLING GIBBONS CARVINGS.—Among the treasures recently removed from the Earl of Chesterfield's collection, Holme Lacy, were the carvings by Grinling Gibbons. These carvings, executed for the second Viscount Scudamore, are of limewood, and consist of birds, fish, flowers, fruit, shells, etc. In the dismantling of the stately homes of England and redistribution of their art treasures, which takes place, unfortunately, too often, many historical specimens are allowed to leave the country. There is some talk of these carvings, which are at present on view at Messrs. Lenygon, 31, Old Burlington-street, going to America, whereas they ought to find a permanent home at South Kensington.

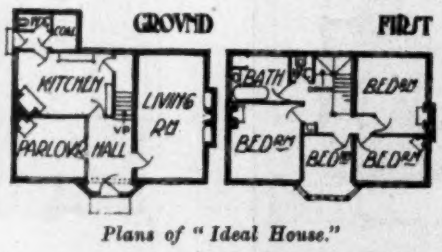
The Ideal House.

NOTES AT THE IDEAL HOME EXHIBITION.

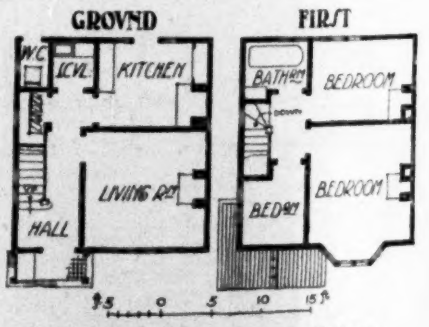


IT is now something more than a year since the holding of the first Ideal Home Exhibition, the success of which has prompted its promoters to repeat the experiment. We doubt whether the effect of the roof decorations of the main hall of Olympia is altogether successful; better, we should say, the naked simplicity of the great semicircular roof than the painted canvas stained-glass and half timber and colossal pasteboard suits of armour. In the annexe stands the Tudor village, a pretty notion, but rather poorly worked out. The manner in which the stanchions supporting the roof have been metamorphosed into the semblance of trees is ingenious and convincing; we cannot say as much for the "Tudor" cottages. The exhibition comprises every sort and form of merchandise bearing on the great object of the idealisation of the home; we can only mention, of course, those which fall within our province as relating to the structure, decoration, and permanent fittings of the finished house.

In the centre of the main hall stands the most important feature of the exhibition, the "Ideal House," designed by Mr. Rupert Davison, and built by Messrs. Holloway. The accommodation comprises living-room, parlour, or "social room," kitchen, four bedrooms, and a bathroom. The living-room is of large dimensions, considering the size of the house. The elevations are pretty and suitable, and the plan well contrived. In all respects it represents as near an approach to the "Ideal Home" as could well be made for the sum of 600*l.* Messrs. Hampton have furnished it complete for 350*l.* We confess that we are not quite certain whether the term "social room" is a nearer approach to the ideal than "parlour." However, as neither the one term nor the other is ever likely to be used by the householder himself the matter is not one of much consequence. The garden and grass-plot surrounding the house were arranged by Messrs. Cheal & Sons. The oak fence was erected by Messrs. Major & Co., and treated with "Solignum." The "Land Company's" cottage (Stall 44), designed by Mr. J. Wornell, is the next most important exhibit. The builders were Messrs. Bridge Barrett & Co. Such a cottage can be erected, we understand, for 200*l.* On the upper floor are three bedrooms and a bathroom, and below living-room, kitchen, scullery, larder, and water closet. But where are coals to be stored? In other respects the plan is distinctly good; the hall, stairs, and landing are very generously contrived (a most important point in a small cottage), and the third bedroom is not only one in name. Immediately to the left of the main entrance is a model of a seaside golfing village, which it is proposed to erect at Happisburgh, near Cromer. This scheme is the design of Mr. Edward White and Mr. C. E. Mallows.



Plans of "Ideal House."



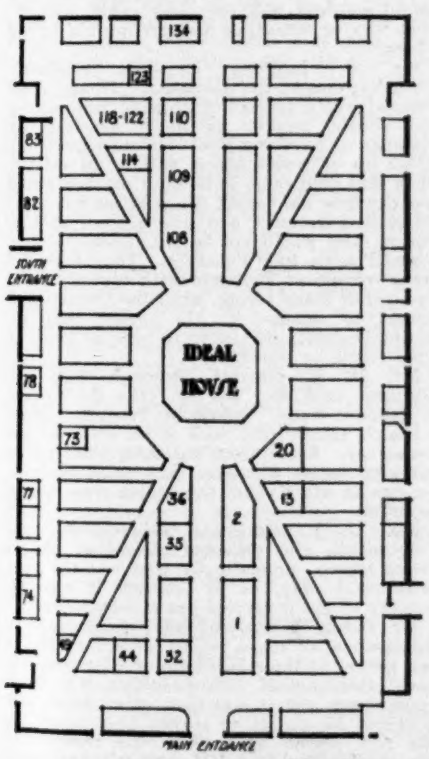
Plans of Land Company's Cottage.

Messrs. Heal & Son (Stall 1) show a series of bedrooms furnished in the style of different periods, as Sheraton, Stuart, Early Georgian, Tudor, Queen Anne, "modern oak," and "decorated." Lest mediævalists should expect to see the embodiment of one of those interiors vividly described by Mr. Gotch before the Architectural Association a few

weeks since we hasten to explain that the "decorated" style exemplified by this bedroom is not that of Rickman. Messrs. Waring & Gillow (Stall 2) show some fine pieces of furniture, notably a bedroom suite of satinwood. Stall 13 was erected by Messrs. H. C. Cleaver, the interior panelled on their "Tudoresk" system; the entrance porch with its treillage columns is rather pretty. This stall also houses Elkington's silver ware. The Royal School of Art Needlework (Stall 20) show some fine tapestries and antique furniture.

Sissons Brothers (Stall 32), the manufacturers of Hall's distemper, have chosen the Adam style as a vehicle for their exhibit. The interior is arranged as a drawing-room, with panels of a delicate and restful shade of green. The door and fireplaces are enamelled with "Orientolac," a flat white enamel which has a very good appearance. Messrs. Derry & Tom's exhibit (Stall 35) is housed in a timber cottage, designed in Russian style, by Mr. E. P. Williams. The Silicate Paint Company (Stall 36) show their "Duresco" on the walls of a small house, with appropriate shades for the various rooms.

The Birmingham Guild (Stall 49) have an excellent exhibit of gas and electric light fittings, thoughtfully and unobtrusively designed. Thomas Potterton (Stall 52) shows the "Queen" combined kitchener and "Victor" gas boilers and accessories; also the "Rex" and "Duchess" kitcheners, using coal alone. The principle on which



Plans showing position of stalls.

these are constructed is one of the best of many securing simultaneous heating of boiler and oven. The "Interoven" Patent Stove Company (Stall 73) show their combined firegrate and cooking stove in action. This stove should prove extremely useful where space is a consideration, as in small cottages and flats. When not in use for cooking its appearance is almost exactly that of an ordinary sitting-room grate. It can be fitted in any ordinary opening 14 in. deep, the boiler flue, of course, requiring a chase to be cut for it. The oven is concealed by a canopy of the usual pattern. The principal novelty shown by the Coalbrookdale Company (Stall 74) is the "K.B." range. "K.B." stands for "kettle boiler," the fire being concentrated right underneath the boiler, "whence the heat passes onwards to heat the hot-plate and the ovens without waste." Consequently the range can perform all its functions simultaneously. The grate itself is V shaped in section, allowing the red fuel to collect at the bottom of the V underneath the boiler. By this arrangement the bottom heat can be utilised for roasting, grilling, and toasting, there being patent attachments for these operations. Among other exhibits we noticed the "Tilt Fire," which was shown at the last Building Trades Exhibition. Messrs. Bratt, Colbran, & Co. (Stall 77) repeat their success of the last Ideal Home Exhibition with a well-designed ingle-nook for their "Heaped Fire," which is certainly worth the attention of visitors. The Carron Company (Stall 78) have a display of grates the beauty of whose casting it would be hard to excel, in many cases replicas of designs made for the firm more than 100 years ago. The Standard Range and Foundry Company (Stall 82) show their new hearth-fire, the "Burkone," which seems likely to be as efficient as the many other forms now on the market. It is claimed that its bowl-like shape will ensure the radiation of the heat in all directions. We noticed one of these fires set in a chimneypiece designed by Mr. Arnold Mitchell, the interior modelled by Mr. Bankart. The Eagle Range and Gas Stove Company (Stall 83) are also in the field with a hearth-fire, the "Eagle," the base of which is formed of fireclay. By this construction it is claimed that more efficient radiation is secured, as metal absorbs a great amount of heat. In the matter of hearth-fires, however, it is a case of six of one and half a dozen of the other; the many variations to be seen at Olympia are about equally efficient.

Messrs. Davis, Bennett, & Co. (Stall 108) exhibit two model bathrooms, with a variety of other sanitary fittings. A fitted housemaids' closet is worth notice. One of the bathrooms is paved with rubber tiling, an expensive luxury, but still a luxury. Messrs. Alfred Goslett & Co. (Stall 109) show sanitary installations suitable for "week-end" cottages and larger homes. We also noticed a very ingenious mortise lock, compactly contained in a cylinder, which could be pushed into a drill-hole. The chief feature of Messrs. Shanks' exhibit (Stall 110) is the patent "Eureka" waste for lavatory basins and sinks, by which chains, plugs, and rods are dispensed with, and the overflow chamber made accessible for cleaning. The spray bath, with screen of armoured glass, deserves notice. The bathrooms shown are lined with Rust's vitreous tiles, the effect of which is very inviting. A novel idea is shown in the rough-cast made with chips of these tiles, a valuable hint for a new method of colour treatment. Pemberton, Arber, & Carey (Stalls 114—117) exhibit their "Sesame" self-opening door. Messrs. Higgs & Hill (Stall 118—122) house their exhibits of hospital furniture in a timber cottage, which has an excellent effect. There is also a chimneypiece designed by Mr. F. E. Williams which is worth notice. We particularly remarked the joiner-made ward furniture. The Martlett Casement Company (123) show their ingenious device —a decided improvement over other forms of patent casements. Messrs. T. & R. Boote (Stall 134) have an interesting exhibit of tiles and faience. The range of under-glaze colour shown is surprisingly wide; a faience mantel, hearth, and kerb containing their "Ideal Fire" should be seen, as well as their small hexagonal flooring tiles, which have a very mosaic-like effect.

Candy & Co. (Stall 63) show examples of their "Devon" Fire in glazed briquette work, tiles, faience, and marble. The merits of this fire are well known. The "Devon" fire was placed first in the tests of domestic grates carried out at the New Public Offices, Westminster, by H.M. Office of Works and the Coal Smoke Abatement Society. At the last Ideal Home Exhibition the "Devon" fire was also selected in open competition as the ideal fireplace for dining-room, study, hall, best bedroom, and nursery. T. & W. Ide (Stall 71) show their "Wellside" fire, a good and economical form of grate. A feature of this fire is that the bottom grating and ashpan, not being fixed in any way, can be removed in summer-time, and the fireplace filled with ferns or flowers. We may remark, by the way, that the "Tudor Village" is insured in the "Phœnix" Office—a concern which, if not rooted so far back in antiquity as the Tudor era, can at any rate boast of more than a hundred years of usefulness.

Architectural Societies.

DEVON AND EXETER ARCHITECTURAL SOCIETY.

We have received a copy of the *Proceedings* of the Devon and Exeter Architectural Society for 1909-1910, from which we learn that the membership is now seventy-seven. The Annual Report contains the following:—

"Your Council have also had under their consideration the question of the schedule of charges printed at the end of the rules, and of adopting a regular scale of charges for quantities. For this purpose communications have been sent to the Royal Institute of British Architects, to the Surveyors' Institute, and the Quantity Surveyors' Association, and information has been obtained from them giving their opinions and regulations for charges for quantities. Your Council have this matter at present under consideration, and hope shortly to issue a scale of charges for the information of members.

In October last your Council received a communication from the Exeter Town Clerk enclosing copies of the revised by-laws for new streets and buildings for the city and county of the city of Exeter, saying the Streets Committee had provisionally approved same, and would be pleased to receive any observations in writing the Society might wish to make thereon, and invited a representative of the Society to attend a meeting of the Streets Committee to discuss such observations. Your Council desired the Committee, consisting of Messrs. John M. Pinn, James Crocker, and Charles Cole, who had previously considered and had interviews with the City Surveyor on the by-laws, to again deal with this matter and report to a general meeting of the Exeter Architects. This meeting was held on November 30 last, when the by-laws were discussed and suggestions made, and Mr. John M. Pinn was appointed to represent the Society at the meeting of the Streets Committee. Your Secretary sent to the Town Clerk a copy of the suggested alterations passed at the general meeting, and Mr. J. M. Pinn attended the meeting of the Streets Committee on December 9. He was very courteously received, and the suggestions were discussed, some of which were approved and others referred back for further consideration by the Committee.

Your Council again regret there has been no response from the younger members in connexion with the London Architectural Association, whereby students of this Society can join the School of Design; therefore the guinea book prize offered by the Society to the competitor whose design is placed first has not been awarded.

For the prize of two guineas in books offered by the Society for measured drawings for 1909, one set was submitted, and was awarded to Mr. J. S. Bray, of Holsworthy."

ABERDEEN SOCIETY OF ARCHITECTS.

The members of the local Society of Architects held an "At Home" in the Art Gallery on the 5th inst., when they had as their guests the members of the Architectural Association, and the company examined the R.I.B.A. students' drawings, about thirty in number. Mr. Arthur Clyne, President of the Society of Architects, presided, and in the course of the evening made some remarks on the drawings and the conditions under which the Institute examinations are conducted,

At the outset he thanked the Art Gallery Committee for putting a room in the Gallery at the Society's disposal, and thought it was a happy circumstance that their exhibition happened to occur at the same time as the exhibition of the works by pupils at Gray's School of Art.

EDINBURGH ARCHITECTURAL ASSOCIATION.

Members of the Edinburgh Architectural Association visited recently the new cattle markets and slaughter-houses at Gorgie and inspected the buildings contained in this undertaking of the Corporation. The visitors were met by Mr. James Williamson, A.R.I.B.A., City Architect, who, in the course of a short address, explained the genesis and development of the scheme under which the establishments at Gorgie have been brought together. He emphasised the fact that architectural treatment had been made subservient to considerations of convenience, utility, and economy, and stated that the cost of the undertaking, excluding private buildings, would be a out 100,000*l*. The visitors were afterwards conducted through the slaughter-houses and cooling halls, cattle market, and corn exchange, and they inspected the public restaurant and the St. Cuthbert's Co-operative Store building, which are in progress of erection.

Engineering Societies.

THE JUNIOR INSTITUTION OF ENGINEERS.

At the last meeting of this Institution, held at the Royal United Service Institution, Whitehall, Mr. J. Wylie Nisbet, M.I.Mech.E., Vice-Chairman, presiding, a paper on "The Transmission of Power by Belts" was read by Mr. R. F. Krall, Assoc.M.Inst.C.E. (member).

After observations on belt driving in general, during which reference was made to bearings, pulleys, superimposed belts, dressing, guide-pulleys, speed, etc., the author proceeded to describe a system of driving by means of thin steel belt, the material being specially manufactured and of very high temper, which is being extended in Germany and Belgium. The method of making the joint was illustrated and an interesting table of results of experiments conducted by Professor Kammerer, of Berlin, at the Charlottenburg University on an elaborate testing plant there was given, as also a table containing comparative figures relating to power transmission by ropes, leather belts, and steel belts. In considering the advantages of the latter it was pointed out that as they do not stretch, the trouble of taking up is eliminated, and no tension is required to allow for stretching. As compared with ordinary belts, very much narrower belts can be employed, varying between one-third and one-tenth the width of ordinary belts, saving much in cost of installation. Speeds up to 10,000 ft. per minute can be employed. Another form of belt driving, in which belts in common use are employed, the invention of Capt. Leneveu, a French artillery officer, and known as the "Lenix" system, was then described. It was shown to consist of a kind of jockey pulley, but was so different from it that experience with ordinary jockey pulleys was no guide to its merits or demerits. The essential feature of the Lenix was a pulley freely floating on the belt, the pulley being mounted on an arm with adjustable counter-weight, this pulley being placed very near to the belt pulley, and the arm capable of moving about the centre of the belt pulley (or as nearly so as might be conveniently arranged). Particulars and lantern slides of various plants were given, and a table relating to three different installations in which the ordinary system was compared with the Lenix, the factors considered being tangential force, tension in driving, and in slack side and friction losses.

In the discussion which followed Messrs. J. G. Moon, C. L. Simpson, W. A. Tookey, G. C. Allingham, G. E. Lygo, A. F. M. Gatrill, R. A. Wolstenholme, A. W. Marshall, S. Bylander, C. H. Woodfield, Percy L. Young, B. E. Dunbar Kilburn, Norman S. Trustrum, — Davidsen, took part, and a vote of thanks was accorded the author.

ABERDEEN CIVIL ENGINEERS.

A special meeting of the Aberdeen Association of Civil Engineers, at which were present members of the Mechanical Society, Society of Architects, and the Architectural Association, was held in Gordon's College on the 8th inst., Mr. Gordon Nicol, harbour engineer, in the chair, when a lecture on "Foundations" was delivered by Mr. C. P. Hogg, C.E., Glasgow. Mr. Hogg, in opening, referred to the different loads which various soils would safely carry, and gave instances of the supporting power of the various strata. In the erection of high buildings in Chicago no attempt was made to prevent subsidence, but an effort was made to secure uniform pressure, so that subsidence might be uniform. In designing foundations the engineers took into account the dead loads only, so as to get as near as possible to uniform subsidence during the erection of buildings. Many of the buildings subsided from six to twelve inches, and it was found that much of the subsidence took place during the first year, the movement continuing for the next three or four years. This practice was not one to be recommended. Mr. Hogg then referred to the failures that took place by retaining walls and dock walls slipping from their foundations. In these days of growing scarcity of timber it was satisfactory to the engineer to know that in concrete, as far as piles were concerned, he had a good substitute, which threatened in time to displace the timber pile altogether. He believed they were about to carry out a very large extension of the harbour with these reinforced concrete piles. Dealing with the work of constructing a foundation, he described the method by coffer dams, and spoke of the extreme durability of timber piles when perpetually covered with water, mentioning a case of piles found to be quite fresh after 125 years. He spoke of the use of screw piles for bridge foundations in sand, and another method of foundation described in the paper was that of putting down cylinders of concrete, steel, and cast-iron, which had been successfully used in constructing dock walls. In early works these cylinders were sunk by the vacuum process, but now they were sunk usually by compressed air. In conclusion, Mr. Hogg referred to the valuable records available to engineers in designing and constructing foundations. The Chairman expressed the gratitude of the meeting to Mr. Hogg for his address.

THE ROYAL SANITARY INSTITUTE:

PROVINCIAL SESSIONAL MEETING, PLYMOUTH.

A TWO-DAYS' provincial sessional meeting of the Royal Sanitary Institute was opened at Plymouth on the 8th inst. The meeting was held at the Western Law Court, and was presided over by Colonel J. Lane-Notter, R.A.M.C., M.D.

Mr. Jas. Paton, Borough Engineer and Surveyor, Plymouth, read a paper on "The Collection and Disposal of House Refuse." He emphasised the importance of the matter from the point of view of public health, and quoted the section of the Act laying the duty on public authorities. Continuing, he said, notwithstanding the establishment of an efficient service by the local authority under the provisions of this Act, it is of paramount importance that public officers responsible for the carrying out of the Sanitary Acts should impress upon householders the importance of burning in the kitchen stove all vegetable and animal refuse, and thus avoid a dangerous accumulation in the dustbin. If this simple precaution were observed the objectionable plague of house flies so common during the summer months would, to a great extent, disappear. Local authorities have experienced difficulty in determining what "house refuse" includes as distinguished from "trade refuse." Several recent cases were quoted to show that, while house refuse did not extend to the refuse of any trade, it did include the refuse of hotels. He went on to describe in detail the experience of Plymouth in this matter, both under contract and by the authority. He gave the following statement of figures as to cost of collection in the year ending March 31, 1909:—

Area of the borough, 2,533 acres; population, 123,156; number of houses, 15,754. The quantity of refuse collected during the year was 23,392 tons, of which 16,615 tons were dealt with at the destructor, 2,096 tons carted to various tips, and 4,680 tons were carted by the contractor to tips outside the borough. The average number of loads collected weekly is 585. The following statement shows the cost of collection per annum:—Total weight collected, 23,392 tons; weight collected per house, 1 ton 9 cwt. 2 qr. 21 lb.; weight collected per head of population, 3 cwt. 3 qr. 9 lb.; net cost, 4,516*l*. 12s. 9d.; cost per house, 5s. 8¾d.; cost per head of population, 8·80d.; cost per ton, 3s. 10½d.

With regard to the disposal of refuse, which used to be done at sea, and before that on the land, both of which methods proved objectionable, he described how the Committee came to the conclusion that the most sanitary means of disposal was by burning. A destructor of the "Perfectus" type was completed in 1901, at a cost of 12,236*l*., plus 512*l*. for a site. The total cost per annum for burning, including interest and sinking fund, was 2s. 7½d. per ton; net cost, 1s. 10½d. per ton. Cost per house per annum, 2s.; per head, 3·08d. A charge of 2s. 6d. per load for the removal of trade refuse brought in 409*l*. 6s. 6d., and the sale of old iron and bottles 76*l*. 17s. 9d. He added that, in his opinion, the collection and disposal of house refuse was a service that ought to be carried out by direct labour in every case, and that contract was not good in this matter. There ought to be no question of profit in it, and the only thing an authority should consider was the most rapid and efficient way of collecting and getting rid of the refuse.

Mr. F. Latham, Borough Engineer, Penzance, opened the discussion. House-refuse disposal was a subject of growing importance, and should receive as much attention as drainage or anything else. He condemned the filling up of waste places with town refuse; when that land came to be built on they would find out how dangerous the practice was. He believed destructors had now arrived at perfection, and would not be a nuisance even in a small town like Penzance. They had had great trouble at Penzance with regard to the removal of trade refuse, until the Council had agreed to remove it. He agreed that inhabitants should be taught to burn as much of their refuse as possible.

Mr. H. E. Garrett, Borough Surveyor, Torquay, said they did not take the trouble to define "trade" refuse at Torquay; being a health resort, they took it all away to the destructor. Every local authority should stop dumping refuse wherever they could place it, because in after years the people were bound to suffer.

Mr. C. F. Gettings, Teignmouth, said Teignmouth also collected all refuse. As to direct labour, undoubtedly that was the only satisfactory way, as by contract it was impossible to get it carried out satisfactorily.

Mr. Paton, in replying, said with regard to the removal of trade refuse, unfortunately at one period of their existence at Plymouth the Local Government Board auditor was down upon them, and it was then pointed out that it would be illegal to collect that refuse, as the Act placed upon them the removal of house refuse only, and if they collected trade refuse they might be surcharged for it. He thought that was a great mistake. From a sanitary point of view all refuse should be removed at once. The removal of refuse from ships had to do with the port sanitary authority.

Mr. O. Hall, Medical Officer of Health, Devonport, then dealt with "The Relative Value of Disinfectants in the Control of Disease."

On the 9th inst. the members made several visits.

ITALIAN ARCHÆOLOGICAL SCHOOL AT ATHENS.—The new Italian Archæological School at Athens was inaugurated on April 7 with an address by the Italian Minister, the Marquis Carlotti, who, in the course of his speech, adverted to the current tendency towards an excess of specialisation in archæological science which, he said, is likely to evolve an exclusive cult open to only the initiated; he advocated the subordination of minute investigation and methods of analysis to a higher artistical interpretation and appreciation of the monuments of past ages.

Competition News.

CHURCH SCHOOLS, BROMLEY, KENT.

The award of the assessor, Mr. H. P. Burke Downing, F.R.I.B.A., of Westminster, in the limited competition for church schools at Masons' Hill, Bromley, was submitted at the last meeting of the Trustees and Managers, and adopted. In his report Mr. Burke Downing says:—"I award the first place to the design marked 'D.' The main building is well situated on the site, and the entrances and exits are well placed. The scheme is an economical one, and the plan solves the problem of arrangement of the classrooms and halls in a very workable manner, and one most helpful to good school administration. The design is very happy in its suitability to the character and purpose of the building. The estimate of 4,930*l.*, based on a foot cube rate of 7d., is, in my opinion, a fair one, and it should be practicable to erect the building at that cost." When the sealed envelopes containing the names and addresses of the competitors were opened, it was found that the author of the design placed first was Mr. C. H. B. Quennell, F.R.I.B.A., and he was appointed architect for the erection of the schools. On the recommendation of the assessor, an honorarium of 20 guineas was assigned to the authors of the design marked "A," Messrs. Russell & Cooper, FF.R.I.B.A. To each of the remaining competitors an honorarium of 10 guineas will be paid. The drawings are hung in the Art School, Bromley.

NEW ACADEMY, DUMBARTON.

A special meeting of Dumbarton School Board was held on the 8th inst. to consider the report by Mr. Samuel Preston, master of works, Govan School Board, assessor on the plans for the proposed new academy at Braehead, Dumbarton. The plans had previously come before the Board, but the measurer reported that none of them could be kept within the expenditure aimed at by the Board—25,000*l.* Two of the sets had been remitted to Mr. Preston and the measurer with a view to ascertaining what modifications could be made in the cost by dispensing with the swimming-bath, the propulsion system of heating and ventilation, and the sanitary wings or outside latrines. Mr. Preston reported that he considered the plan submitted by Mr. John Rogerson, Dumbarton, fulfilled the conditions of the competition at a reasonable cost. The estimate of the original cost of Mr. Rogerson's plans was 31,350*l.*, but this Mr. Preston thought could be modified to 26,590*l.* if the subjects mentioned were dispensed with. If the sanitary wings were retained and the outside latrines dispensed with 800*l.* would be added, making a total of 27,390*l.* The assessor suggested the retention of the sanitary wings. The Board accepted the decision of Mr. Preston, and agreed to confer with the architect relative to the modifications.

SCHOOL, PETERBOROUGH.

In our last issue we stated that Messrs. Packer & Drewitt were placed fifth in the secondary school competition at Peterborough. We are informed that this should have been Messrs. Packer, Drewitt, & Drewitt.

Correspondence.

LICENTIATES R.I.B.A.

SIR,—Your admirable article on this subject will, I hope, be read with deep attention by all architects (whether principals or assistants) who are not at present connected with the Royal Institute of British Architects, as it so lucidly expresses the advantages to the individual, to the Institute, to the profession, and to the public.

May I, as one who has taken a very active part in every modern reform and development of the Royal Institute, and who for years has been working to establish the new class for those architects who, for the reasons you state, have been hitherto precluded from joining the central body, venture to support your urgent recommendation to candidates? Already there are several hundreds of applicants. The title of "Licentiate" is conferred by Royal charter; as a title it has its parallel in the L.R.C.P. of the medical profession, and the power for Licentiates to become candidates for the Fellowship, should they so desire, is secured by the charter. In the new scheme the Institute has the loyal and cordial support of all the allied societies throughout the kingdom.

A great opportunity is now afforded of gathering into the representative organisation, with all that that implies, all *bonâ fide* architects, and as soon as the Licentiates are enrolled a Parliamentary Bill now being drafted is to be submitted for the consideration of the Institute to secure statutory recognition.

EDWIN T. HALL.

METROPOLITAN ASYLUMS BOARD.

AT the fortnightly sitting of this Board on Saturday last week, the following, amongst other matters, were dealt with:—

Darenth Asylum.—A report was received from the Engineer on the subject of the rainwater drains at the Training School, Darenth Asylum, which had become choked with the roots of trees, etc., which had entered owing to the joints becoming perished. Mr. Hatch proposes to relay the drains where found necessary, following the lines of the old drains so far as they are known. The cost of the whole of the system, should it be found to require renewal, was estimated at 1,500*l.* It was decided to refer the matter to the Works Committee to deal with. When the Managers in June, 1908, originally approved the provision of additional needle-room accommodation for the patients at Darenth Asylum, the Works Committee were instructed to arrange for the necessary works to be carried out by direct labour. In view, however, of the provisional terms of the Local Government Board's sanction to the plans, and to the fact that the buildings are now to be erected under the supervision of an architect, the Works Committee were of opinion that tenders for the erection of these workrooms should be invited by advertisement in the usual way, and arrangements will be made accordingly.

Leavesden Asylum.—A report was received from the Works Committee, stating that from time to time during the past two years portions of the ceilings in various parts of this asylum, which was opened nearly forty years ago, had collapsed. During the past few months the defects have become more and more serious, and the Engineer reports that they are due to the condition of the plastering, which is very friable, crumbles up without difficulty, and contains a considerable proportion of comparatively large stones, the presence of which has tended to destroy the cohesion of the material. The Engineer estimated that the reinstating of the ceilings would cost approximately 2,900*l.*, exclusive of the cost of redecorating the walls. The Committee decided to obtain outside opinion, and Mr. Geo. Elkington, F.R.I.B.A., was consulted, and he reported that the cost of replacing with fibrous plaster the existing ceilings and sloping soffits would be 2,849*l.*, or, alternatively, 2,710*l.* if certain of the ceilings are dealt with in a modified form. It was agreed to authorise the Committee to carry out the necessary work, at a cost not exceeding 2,900*l.*

PROJECTED NEW BUILDINGS IN THE PROVINCES.

ABERDEEN.—Tinplate factory, Roslin-place (2,000*l.*); Mr. J. Rush, 224, Union-street, Aberdeen. Catholic church (4,000*l.*); Mr. C. J. Menart, 241, West George-street, Glasgow.

Ampleforth.—Improvements to St. Benedict's Church; the Vicar.

Ashcott.—School (300 places); Messrs. Cottam & Samson, architects, Bridgwater.

Ayr.—School, Green-street (8,000*l.*); Mr. D. Cowie, Alloway-chambers, Ayr.

Balgeddie.—Hall buildings (2,000*l.*); Mr. G. P. K. Young, 42, Tay-street, Perth.

Barking.—The Urban District Council has passed the following plans:—Additions to factory, Creeksmouth, for the London Butchers' Hide and Skin Company, Ltd.; seven houses, Devon-road, for Mr. G. Clark.

Bilsthorpe.—School; Mr. Leonard Maggs, architect, Nottingham.

Blackrod.—Restoration of St. Catherine's Church (1,100*l.*); the Vicar.

Blaydon-on-Tyne. — Underground convenience; Surveyor to Council.

Brecon.—Infant school (300 places); Mr. C. W. Best, architect, County Hall, Brecon.

Bude.—Wesleyan Sunday-school (3,038*l.*); Mr. W. H. Beekley, architect, Bude; Mr. E. Wise, builder, Launceston.

Burnham-on-Crouch. — Public bath and promenade works; Surveyor, Urban District Council.

Bushey Heath (Herts).—Proposed alteration and enlargement of St. Peter's Church; Rev. T. V. Garnier, vicar.

Carlton. — Wesleyan Sunday-school; the Trustees.

Carluke.—Public school (2,500*l.*); Mr. W. Martin, architect, Carluke.

Childer Thornton.—School (2,000*l.*); Mr. H. Beswick, County Architect, Chester.

Collin (Dumfriesshire).—Extensions, public school (2,150*l.*); Mr. F. Adamson, architect, Collin.

Cowdenbeath.—Extensions, Cowdenbeath Co-operative Society premises (2,000*l.*); Mr. A. Birrell, architect, Kirkcaldy.

Darlington.—The Darlington Town Council have approved the plans of the following:—Messrs. Kitching & Lee, two houses in Oakdene-avenue, house and workshop in Greenbank-road, and two houses in Borough-road; Mr. G. W. Davis, alterations to premises in Post House Wynd, and two houses in Oakdene-avenue; Messrs. J. P. Pritchett, back street off Uplands-road; Mr. J. E. Chilton, eight houses in Westgarth-terrace, house in Newfoundland-terrace, and four houses in Newfoundland-terrace; Messrs. R. Blackett & Son, house in West-crescent; Mr. W. Pallister, extension to the Darlington Union Workhouse; Mr. G. Blakey, alterations to shop in Prebend-row.

Dawlish.—Public hall (1,800*l.*); Mr. S. Dabell, architect, Queen-street, Exeter.

Durham.—School, Byers Green (3,000*l.*); Mr. W. Rushworth, architect, Durham.

Elichester.—Extensions and improvements to St. Ebba's Church (1,000*l.*); the Vicar.

Four Lanes End.—School (3,000*l.*); Mr. W. Rushworth, architect, Durham.

Glasgow.—Additions, Messrs. W. White & Sons, engineers, premises (2,000*l.*); Messrs. White & Galloway, 121, Bath-street, Glasgow. Extension of Messrs. Carson's chocolate factory, Bridgeton (2,750*l.*); Messrs. Duncan & Copeland, architects, 146, West Regent-street, Glasgow. Workshop buildings, for Mr. John McDonald, builder (2,000*l.*); Mr. R. C. Douglas, 121, Greenhead-street, Glasgow. Shop and warehouse buildings, High-street and Bell-street (28,000*l.*); Mr. A. B. McDonald, City Engineer, Glasgow.

Grimsby.—Shelter, conveniences, etc., playing field; Mr. H. Marrows, builder, 84, Garden-street, Grimsby. The Town Council has passed a plan, lodged by Messrs. J. & H. C. Drayton, for ten houses, Arthur-street.

Halifax.—Conversion of old riding school, near Ward's End, into electric theatre (2,200*l.*); Messrs. R. Horsfall & Sons, architects, 22A, Commercial-street, Halifax

Hove.—Ward block at sanitorium (2,546*l.*); Mr. H. H. Scott, Borough Surveyor. The Town Council has passed a plan lodged by Messrs. Barclay & Co. for bank, shops, and flats, Boundary-road, corner of New Church-road.

Huddersfield.—Shed, Clayton West (1,500*l.*); Messrs. Sam. Jackson & Son, Tanfield-chambers, Bradford.

Isleworth. — Laundry, for Brentford Guardians.

Kibbarchan.—Extensions of public school (4,000*l.*); Mr. W. W. Howie, architect, 213, West Campbell-street, Glasgow.

Leicester.—Extensions and alterations at Museum and Art Gallery (6,901*l.*); Mr. James Chapman, builder, Rutland-avenue, Leicester.

Llanelly.—Tinplate works, for Messrs. Thomas & Co., Ltd.; plans by firm's own staff.

Lochgelly.—Rebuilding co-operative premises (18,000*l.*); Mr. J. T. Scobie, Dunfermline.

Loughborough.—The Town Council of Loughborough have given their sanction to the erection of a house and shop, Nottingham-road, for Mr. J. G. Squires; water-closets at premises No. 85 to 91, Station-street, for Mrs. W. G. Cotton; and alterations to premises, Pinfold-gate, for Mr. J. Warrinor.

Milnsbridge (Huddersfield).—Shed, Botham Hill Mills (1,800*l.*); Messrs. P. Taylor & Co., Milnsbridge, Huddersfield.

Nethercommon.—Carpet factory (2,500*l.*); Mr. T. G. Abercrombie, 1, County-place, Paisley.

Newbridge.—School (350 children); Mr. John Bain, Council Offices, Newport.

Newcastle-on-Tyne.—Improvements at Northumberland-road Baths (15,000*l.*); Surveyor, City Council.

Newton Abbot.—Secondary school (9,900*l.*); Mr. P. Morris, Architect, Newport.

Northam (Northum.).—School (3,000*l.*); Mr. W. Forrest, architect, Newcastle.

Ogmore Vale.—Rink; Mr. A. Williams, Yuis-y-Cwl, near Bridgend.

Parkhead (Glasgow). — Additions, Messrs. Appleby's works (3,000*l.*); plans by firm's own staff. Factory, for Messrs. Wilcox, chemical manufacturers (2,500*l.*); Mr. A. Davie, 11, Riverside-road, Newlands, Glasgow.

Pickering (Yorks).—Church (3,500*l.*); Mr. Leonard Stokes, 2, Great Smith-street, S.W.

Plymouth. —The Town Council has passed the following plans:—Twenty-two houses,

Rosslyn Park-road, for the Plymouth Co-operative Society, Ltd.; electric theatre, Ebrington-street, for Mr. A. E. Bryant. The following plans have been lodged:—Ten houses, Pounds Park-road, for Mr. R. Pearse; sixteen villas, Hamilton-road, for Mr. Palk, jun.

Pontsarn. — Sanatorium (fifty patients); architect, Merthyr Guardians.

Rhymner Valley.—School (350 children); Mr. J. Bain, Council Offices, Newport.

Rotherham.—The Town Council has passed the following plans:—Bottling stores, etc., Howard-street, for Messrs. Garnett Brothers; eight houses, Albion-road, for Dr. J. W. Fox; four houses, Hatherley-road, for Mr. H. James; eight houses, Oats and Mount streets, for Mr. Thos. Davage; twenty-two houses, Blackburn-lane and Droppingwell-road, for Wm. Cooper. The following plan has been lodged:—Conversion of old chapel into three lock-up shops, Westgate, for Mr. Wm. Haffety.

Salsburgh.—School (4,000*l.*); Mr. Jas. Cowie, Cleland-road, Wishaw.

Scotswood.—Church (5,000*l.*); Messrs. Hicks & Charlewood, architects, 57, Westgate-road, Newcastle-on-Tyne.

Seaforth.—Parochial hall; Mr. F. Rimmington, architect, May-buildings, 51, North John-street, Liverpool.

Selston Baythorpe.—School; Mr. Leonard Maggs, architect, Nottingham.

Selston Jackson.—School (1,000*l.*); Mr. L. Maggs, architect, Nottingham.

Sheffield.—The Town Council has passed the following plans:—Twenty-six houses, Chesterfield-road, for Mr. T. W. Unwin; alterations and additions to premises, Cavendish-street, for Messrs. Isaac Ellis & Co.; schools, Carlton-road, for Mr. Talbot E. B. Wilson; eight houses, Pexton-road, for Mr. J. Thirsk; electric theatre, London and Guernsey roads, for Messrs. T. Langton & Sons; fourteen houses, Crimicar-lane, for Mr. H. Holland; additions and alterations, premises, Furnival-street and Brown-lane, for Messrs. Crookes, Roberts, & Co.; three houses, Limpsfield and Stupton roads, for Mr. G. Exley; addition, premises, Burngreave-road, for Messrs. Hornbuckle & Son; four houses and stabling, Marcliffe-road and Wadsley-lane, for Mr. A. Lonsdale; addition to premises, Hatfield House-lane, for the Duke of Norfolk; six houses, Chatfield-road, for Mr. M. J. Gleeson; seven houses, Duke-street and Robinson-road, for Mr. J. Coward; additions, women's hall of residence, Training College, Ecclesall-road and Collegiate-crescent, for Sheffield Corporation; four houses, Stannington-road, for Messrs. F. Dawson & Son; additions, premises, Dovedale-road, for Messrs. J. S. Teanby & Son; additions, premises, Rutland-road, for the Sheffield Brick Company, Ltd.; additions, premises, Attercliffe-road, for Messrs. G. Oxley & Sons; additions and alterations, buildings, Barnsley and Horndean roads, for the Rev. L. E. Day; infants' school, Owler-lane and Earl Marshal-road, for the Sheffield Corporation; alterations, premises, Carbrook-street, for the Brightside and Carbrook Co-operative Society; school, Psalter-lane, for the Committee of the Boys' Charity School; three houses and alterations, premises, Channing-street, for Mrs. Cowkham.

Shotley Bridge.—Hospital (4,000*l.*); Messrs. Newcombe & Newcombe, architects, Pilgrim-street, Newcastle.

Skipton.—Beaming-house at Belle Vue Mills (3,000*l.*); Mr. J. Hartley, Skipton.

Southend.—Completion of nave at St. Erkenwald's Church (4,290*l.*); Messrs. Jarvis & Co., builders, 44, Guildford-street, E.

Southmean.—Premises (45,000*l.*); for Bristol School of Industry for the Blind; Committee of Management.

Stanningley (Leeds).—Warehouse, Leigh Mills; Messrs. T. Barker & Sons, Bradford.

Torquay.—The Town Council has passed the following plans:—Nine houses, Ellacombe Church-road, and two houses, Barton Cross, for Mr. G. Tozer; eight houses, Babbacombe-road, for Mr. A. B. Lyle; addition to "The Boltons," for the Misses Whitworth & Satchwell; vicarage house, for the Rev. Dodgson; four houses, Teignmouth-road, for Mr. R. E. Narracott; garage at the "Cranley," for Mr. A. B. Appleby.

Tradeston. — Lodging - house buildings (10,800*l.*); Messrs. Cullen, Lochhead, & Brough, Brandon-chambers, Hamilton, N.B.

Tunstall.—St. Mary's Church, school, and new infants' school (4,000*l.*); Mr. H. Dain, architect, Tunstall.

Wallsend.—Rink; Messrs. Simpson & Lowson, Emerson-chambers, Newcastle. School (8,000*l.*); Mr. W. Forrest, architect, Moot Hall, Newcastle.

Walsall.—The Town Council has passed a plan, lodged by Messrs. H. Moseley & Sons, for a casting-shed and pattern-room, Windmill-street.

Watford.—Pump-house (330*l.*); Messrs. Gibbons, builders, Dudley.

Wigan.—The Town Council has passed the following plans:—Seven houses, Birch-street, for Messrs. Makin & Mason; six houses, Scot-lane and Laurel-street, for Mr. John Fairhurst; six houses, Gidlow-lane, for Mr. Wm. Asson; five houses, Stepforth-street, for Mr. M. Clayton.

Ynysybwl. — Parish and mission room (1,150*l.*); Messrs. T. E. Richards & Kaye, architects, Pontypridd and Cardiff; Messrs. Williams Brothers, builders, Thompson-street, Ynysybwl.

LONDON AND DISTRICT BOROUGH COUNCILS.

Barnet.—Plans have been passed for the rebuilding of Watson's factory, West End-lane. Plans have been lodged for the extension of the Model Laundry, Falkland-road.

Battersea.—Electric mains are to be extended at an estimated cost of 115*l.*, and repairs are to be carried out in five roads, at 1,060*l.* 5s. Negotiations, which were once broken off, have been finally concluded with Messrs. Arding & Hobbs for the acquisition of property to widen St. John's-road in front of their premises to 50 ft. The firm is to accept 6,000*l.* from the Borough Council, and are to be allowed pavement lights for a width of 2 ft. throughout their frontage in St. John's-road. The cost of the necessary paving works is put at 700*l.* A plan lodged by Mr. A. Wellings for buildings, Battersea Rise House Estate, has been passed.

Camberwell.—Plans have been passed for Mr. F. Brown to erect buildings at 28 to 40, Denmark-hill.

Chelsea.—Mr. B. E. Nightingale is to carry out repairs to the Council's dwellings, the contract price being 382*l.*

Fulham.—The Council has had under consideration the manner of dealing with a portion of South Park, reserved for the purpose of children's games. The cost of frequently returfing same at present is great, while proposals to lay down tar-paving have been rejected on account of the prohibitive expense. The Borough Engineer has suggested that a suitable surface may perhaps be obtained by adopting the method employed in California of mixing asphaltum oil with the soil; 10*l.* is to be spent in experimenting in this direction in a small portion of the park.

Lewisham.—Plans, prepared by the Surveyor, have been passed for paving and forming part of Verdant-lane, at an estimated cost of 1,648*l.* The widening of the same lane is to be carried out by the Borough Surveyor for the South-Eastern Railway Company. The cost is put at about 2,450*l.* Mr. W. Pearce is to kerb, channel, and make up the roadway and footways of Ravensbourne-park, at a cost of 2,123*l.* for the roadway, and 4s. 2d. per super. yard for the footways. The following plans have been passed:—Messrs. James Watt, eighteen houses, Bromley-road and Arran-road; Messrs. Norfolk & Prior, eighteen houses and two workshops, Elmer-road, Duncrievie-road, and Hither Green-lane; Messrs. W. J. Scudamore & Sons, fourteen houses, Manor-lane and Redruth-road; Messrs. W. Smith & Son, laundry, garage, etc., Bromley-road; Mr. H. E. Davey, ten houses, Perry-hill; Mr. H. R. Hunter, eight houses, Tannsfield-road.

St. Pancras.—The representatives of St. Pancras upon the London County Council are to be asked by the Borough Council to urge that the widening of Euston-road may be carried out as a metropolitan improvement at an early date. Plans have been lodged on behalf of the New Hospital for Women, 144, Euston-road, for the erection of an addition to abut upon Churchway.

Westminster.—In connexion with the extension of the National Gallery, and the removal of the remainder of St. George's Barracks shortly to be effected, the First Commissioner of Works has written to the City Council stating that arrangements have been made with the Earl of Lonsdale for the demolition (at least in part) of his stables for the security of the Gallery against fire. By the clearing of the plot a continuous strip of vacant ground will be secured, which will isolate the National Gallery, and the Commissioner of Works asks the City Council to acquire land for the formation of a public thoroughfare, which will be a widening and prolongation of St. Martin's-street. The City Engineer estimates the cost of the paving works to total 2,207*l.*, and the necessary land can be acquired at a cost to the Council of 1,000*l.* The Improvements Committee have decided in favour of the carrying out of the scheme. The Office of Woods has lodged plans for the re-erection of buildings in Regent-street, Piccadilly-circus, and Glasshouse-street. The Improvements Committee of the Council, having considered same, have decided to object to proposed alterations at the south-west and south-east corners of Piccadilly-circus, as they are of opinion that neither the building line nor the kerb line at this point should be brought forward beyond the present lines. They also held that the retention of the narrow building at the corner of Glasshouse-street and Regent-street is objectionable, and that the corner should be set back at least behind the line of the western frontage of Sherwood-street, and should be rounded off. Repairs are to be carried out to conveniences by Mr. J. R. Sims at 293*l.*

Wimbledon.—The Town Council has passed the following plans:—Warehouse and stable, rear of 100, Merton-road, for Mr. S. J. Hobson; buildings, Arterberry and Dunmore roads, for Messrs. Chinnock, Clark, & Chinnock; six cottages, Thornton-road, for Messrs. Charlton & Co.; garage and cottage, Old Rectory House, for Mr. B. S. Jacobs. The following plans have been lodged:—Extensions and additions, Worple Hall, Worple-road, for Mr. H. E. Richards; eight houses, Durnsford-road, for Messrs. Ryan & Penfold; bioscope palace, Merton High-street, for Mr. J. C. Walker; conversion of No. 16, Victoria-crescent, into cinematograph hall, for Messrs. Smith & Sons.

Obituary.

MR. W. M. MITCHELL.

The death is announced of Mr. William Mansfield Mitchell, R.H.A., principal partner of the firm of Messrs. W. M. Mitchell & Sons, of St. Stephen's-green, Dublin. Mr. Mitchell was a Past-President (1904-7) and a member of Council of the Royal Institute of the Architects of Ireland; he was also a member of Committee of the Architectural Association of Ireland. He was elected a Fellow of the Royal Institute of British Architects in 1899, and served as a representative member of Council, 1905-8; in 1880 he joined the Architectural Association. Of Mr. Mitchell's more important architectural works we may mention the following:—In Dublin, as architect to the Central Hotel Company, Ltd., extensive additions to the Central Hotel, 1897-9; the "Acme Works," for Messrs. Hely, Son, & Co. (1895); Ormond Quay Presbyterian Church Hall; Messrs. Pim's furniture warehouses, Exchequer-street; St. George's National Schools, Lower Sherrard-street, for 500 children; enlargement of the City of Dublin Technical Schools, Lower Kevin-street (1900); enlargement of Christ Church, Rathgar; the James Weir Nurses' Home, for the House of Recovery and Fever Hospital, Cork-street; and numerous other buildings.

MR. LIONEL G. DETMAR.

We regret to announce the death of Mr. Lionel G. Detmar, A.R.I.B.A., who, on Saturday last, was thrown from his horse at Epsom, Surrey. Mr. Detmar was articled to his uncle, Mr. W. Hilton Nash, and afterwards assisted Mr. John Belcher, A.R.A., for a couple of years. He was an active member of the Architectural Association, and obtained the Travelling Studentship Competition in 1902. His first important building was the French Applied Arts Palace at Shepherd's Bush; he also carried out work for the London City and Midland Bank, and had just completed the large skating-rink in Maida Vale. His other works included several interesting country houses. This unfortunate accident has terminated the promising career of a young architect from whom much might have been expected in the future. We desire to express our sympathy with Mr. Detmar's relatives in their bereavement, and with his partner, Mr. Theodore Gregg, in the loss of so able a coadjutor.

MR. J. HORSFALL.

We have also to announce the death of Mr. Jesse Horsfall, of Chapel-walks, Manchester, and Todmorden, a Fellow, and member of Council, of the Manchester Society of Architects. Mr. Horsfall was elected a Fellow of the Royal Institute of British Architects in 1893. He was the architect of the Rochdale Corporation Free Library and Art Gallery in 1884, being then a member of the Borough Surveyor's staff, and he made extensive additions to the buildings nine years ago; his designs were accepted in competition by the Rochdale Libraries Committee for the Crompton and Castleton Moor Free Libraries, 1904-7. He prepared the designs for the new post-office buildings, the Union offices, and firemen's cottages, Todmorden, and for a number of other buildings in the district.

General Building News.

WESLEYAN CHURCH, BARRY DOCK.

A new Wesleyan Methodist church is being built in Holton-road, Barry Dock. It is estimated that the new church will accommodate 650 persons. Beneath there will be a meeting-hall capable of seating several hundred, a church parlour to hold 120, and also classrooms for the Sunday-school. The contractors are Messrs. Lloyd & Tape, Barry Dock, and the architect Mr. Henry Budgen, Cardiff.

CHURCH SCHOOLS, NEWCASTLE.

New schools are to be built in connexion with St. John's Church, Newcastle. The plans have been prepared by Mr. Charles Errington, of Newcastle, and it is proposed to spend about 3,500*l.* on the work.

NEW SCHOOL, AYR.

The Ayr School Board have resolved to build a new school to accommodate 700 scholars on a site in Green Street-lane, near Newton Academy, which is to be converted into an infant school. The estimated cost of the new school is 10,000*l.* Mr. William Cowie, architect, Ayr, has been instructed to prepare the plans.

SCHOOL, LICHFIELD.

A day school is in course of erection for the parish of Christ Church, Lichfield. The new school is being built from plans prepared by Mr. F. T. Beck, architect, of Wolverhampton, and will contain five classrooms, capable of accommodating 192 elder children and sixty infants. The amount of the contract is 2,190*l.*, and the work is being carried out by Messrs. Thorneloe & Son, Lichfield.

COUNCIL SCHOOL, WORTHING.

A new school has been erected by the Worthing education authority in Ham-road to supply the needs of the Broadwater district. The school, the contract for the erection of which amounted to 5,338*l.*, has been designed by the Borough Surveyor, Mr. F. Roberts. It will accommodate 340 boys and girls.

COUNCIL SCHOOL, WALTHAM ST. LAWRENCE.

A new provided school has been erected by the Berkshire County Council at Waltham St. Lawrence. The school, which has cost 3,300*l.* to build and equip, exclusive of the cost of land, has accommodation for 204 children, and contains five classrooms. The architect is Mr. Fisher, London.

ENLARGED PAROCHIAL BUILDINGS, GATESHEAD.

An enlargement is being made to St. Chad's parochial buildings in Westminster-street, Bensham, Gateshead. The site of the extension is 43 ft. by 35 ft., and upon it a two-storied building of red brick and stone will be erected. The plans were prepared by Messrs. Hicks & Charlewood, and the contractor is Mr. W. Hall, of Gateshead.

HOSPITAL FOR WOMEN, BRADFORD.

Rose Mount Villa, a residence situated in Queen's-road, Bradford, has been acquired by Mr. J. K. Waddilove, of Manningham, and at his expense converted into a hospital for women. Messrs. S. Robinson & Sons, architects, of Bradford, were responsible for the plans for the remodelling of the premises. The total cost, including purchase, has been about 6,000*l.*

MEMORIAL CLOCK TOWER, STRAITS SETTLEMENTS.

A clock tower has been erected at Ipoh, Perak, in memory of the first President of that Settlement, the late Mr. J. W. W. Birch, who was murdered by Malays on November 2, 1875. The memorial is 72 ft. in height, and stands on a base 41 ft. square. Above the lowest stage of the tower is a painted faience frieze depicting the progress of civilisation. This piece of work was executed in London by Messrs. Doulton & Co., and designed by Mr. A. E. Pearce. The same firm were also responsible for four life-size figures representing the virtues, "Justice," "Loyalty," "Patience," and "Fortitude." On one side of the tower is a niche, and in this has been placed a bronze portrait bust of the late President. The bust was cast from a model prepared by Mr. Hamo Thornycroft, R.A. The clock and bells were supplied by Messrs. Gillet & Johnson, of Croydon. Messrs. Williams, Draper, & Steadman, Singapore, were the architects for the work, their designs being accepted in competition.

WORKMEN'S DWELLINGS, LONDON.

Past experience in the way of providing blocks of dwellings and founding colonies for working men has not been altogether satisfactory. Many of the larger buildings erected by public associations and local government bodies are occupied less than could be desired by the classes for which they were intended owing to the relatively high rents demanded. The same thing is noticeable in various colonies of small houses built for working men on the outskirts of London. A scheme for the housing of the working classes which embodies some excellent features is represented by the extensive block of dwellings recently opened at Islington by the trustees of the late Mr. Samuel Lewis. The establishment comprises six five-story buildings, covering about 2½ acres of land, and provides accommodation for more than 1,500 persons in the form of one-room tenements at rents ranging from 2s. to 2s. 6d. per week, two-room tenements at rents of from 4s. 6d. to 6s. per week, and three-room tenements at rents of from 6s. 6d. to 8s. per week. The dwellings have been erected by the Trustees upon a site having a frontage of 403 ft. to Liverpool-road, and a return frontage of 292 ft. to Flight's-yard, Islington, containing a superficial area of about 2½ acres. They consist of six parallel blocks, and are five stories in height. The buildings are separated by roadways or playgrounds, 40 ft. wide, and all the elevations are faced with red Leicester bricks, relieved with dressings of artificial stone of a pale buff tint. The landings and staircases are tiled from floor to ceiling, and the balustrades to the staircases are constructed of ornamental panel balusters, instead of the usual plain bars. The floors throughout are of fireproof construction, and the landings and pavings are formed of granolithic material. The whole of the tenements have been built upon the self-contained principle. The single rooms have an average area of 180 ft., and the living-rooms have an average area of 180 ft. The bedrooms of the two-room tenements have an average area of 130 ft. The two bedrooms of the three-room tenements have an average area of 120 ft. and 110 ft. respectively. The scullery is not counted as a room. All the tenements are provided with entrance lobbies constructed of fire-resisting material, and in each lobby there is a small recess, with hat and coat hooks therein. Every tenement contains a large scullery, in which has been fitted a sink and a bath of enamelled cast-iron of the strongest description, and also a portable iron copper to enable the tenants to wash their own clothes. The fire in the range provided (patented by the architects, and made by the Falkirk Iron Company) can be transferred from the scullery to the living-room after the cooking for the day is done by means of an arrangement of an iron shutter between the two rooms. The range, in addition, heats the two rooms, cooks the dinner of the tenants, and also provides a constant supply of hot water to the bath and sink. The bath is covered with a table-top so that when not in use as a bath it forms a table. Leading from the scullery is an open balcony, from which access to a larder and water-closet is obtained. A drying-room to enable the tenants to have their clothes or washing dried has been provided, where the heat is permanently maintained at a high temperature. A workshop is also provided for the use of the porters, so that any small repairs that are needed can be done on the premises. The cost of the land and buildings has been approximately 95,000*l.* The architects are Messrs. Joseph & Smithem, of London, and the builders Messrs. G. E. Wallis & Sons, Ltd., of Maidstone, Kent.

TRADE NEWS.

Messrs. Walton, Gooddy, & Cripps, Ltd., quarry owners and workers in marble and granite, Eagle Wharf-road, N., etc., are showing at the Architects' Technical Bureau, 24-25, Hart-street, W.C., a collection of marble samples and some specimens of onyx and lapis lazuli.

We understand that the business of the "Zeta" Wood Flooring Company, Ltd., has been purchased outright from the receiver and manager, but the change is only proprietary, as Mr. William J. Bennett retains the general management of the new company, and will have the same executive staff associated with him as since the foundation of the old company in 1907.

Messrs. F. McNeill & Co., Patent Felt Works, Bunhill-row, London, E.C., inform us that they have decided for family reasons to convert their business into a private limited company, the proprietorship remaining, however, in the same hands. The conversion will not affect the general conduct of the business, which will be carried on as heretofore.

Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester, have supplied their patent Manchester grates to Dr. Williams's School, Dolgelley.

Messrs. J. G. Childs & Co., Ltd., electric and hydraulic engineers, etc., Willesden Green, N.W., have just received an order for fourteen electric lifts from the Great Eastern Railway Company for the Liverpool-street Hotel.

Miscellaneous.

PROFESSIONAL AND BUSINESS ANNOUNCEMENT.

Siemens Brothers Dynamo Works, Ltd. (Supplies Department, 39, Upper Thames-street, E.C.), announce that they have now four lines of Telephone, No. London Wall 8270, instead of London Wall 6520.

MEMORIAL OF THE LATE COLONEL SAUNDERSON.

A memorial statue has been erected in Belfast of the late Colonel Saunderson, M.P., the well-known leader of the Irish Unionist party. The statue, of which Mr. W. Goscombe John, R.A., was the sculptor, with the plinth, is of bronze, and is about 9 ft. high. The pedestal is of grey granite and on one side bears an inscription. The contractors for the granite work were Messrs. M'Cullough & Sons, of Crowreagh Quarries, Newry. The pedestal was supplied and erected by Messrs. Kirkpatrick Brothers, Manchester, and the erection was carried out under the supervision of Mr. W. Kirkpatrick. The bronze statue was cast by Mr. A. B. Burton, of Thames Ditton, Surrey.

THE SURVEYORS' INSTITUTION.

Mr. Alex. R. Stenning, F.R.I.B.A., President of the Surveyors' Institution, gave a successful "At home" at the Institution premises, 12, Great George-street, on the evening of Wednesday, April 6, which was attended by upwards of 350 members. Among those present were Sir Robert Chalmers, K.C.B., Mr. H. Chatfeild Clarke, Mr. F. G. Chinnock, Mr. S. H. Cowper-Coles, Mr. Percivall Currey, Mr. Duke, Mr. W. Hurst Flint, Sir Alfred Gelder, M.P., Mr. W. E. Horne, M.P., Mr. E. B. I'Anson, Mr. George Langridge, Mr. J. H. Oakley, Sir John Rolleston, M.P., Mr. E. W. Rushworth, Mr. J. H. Sabin, Mr. Alfred Savill, Mr. H. T. Steward, Hon. E. G. Strutt, Sir Henry Tanner, Mr. H. W. D. Theobald, Mr. Tindall, Mr. Arthur Vernon, Mr. Leslie Vigers, Mr. W. H. Warner, Mr. Daniel Watney, Mr. H. J. Watson, and Mr. Alexander Goddard, Secretary.

THE POWERS OF A CLERK OF WORKS.

We quote the following from the *Master Builder and Associations Journal* for April 6:—"The plaintiffs were a firm of brick and terra-cotta manufacturers of high standing, and the defendant (who was really an innocent party) a contractor, engaged by the Eccles Corporation for the erection of a school. The case turned on to the question as to whether or no the clerk of works in charge of the job exceeded his powers in rejecting a quantity of bricks supplied by the plaintiffs to the defendant's order, and in the result the plaintiffs won, receiving substantial damages. The bricks in question were glazed bricks of 'second' quality, and in accordance with the architect's specification. When the first consignment of these was delivered the clerk of works (who was also, by the way, an employee of the Eccles Corporation), acting, as was stated, without the accordance of the architect, condemned the bricks. The makers, when this was intimated to them, offered to substitute others, but the clerk of works declined to consider any material whatever supplied by the plaintiffs, and this was intimated to the contractor, who, of course, had then no option but to cancel his agreement with plaintiffs. Throughout the whole of the business the builder stood in a very unfortunate position. A further sidelight is shown on the case by the fact that the plaintiffs delivered to another public authority in the neighbourhood of Manchester, similar material to that specified and rejected at Eccles, and on this second contract the goods were accepted without question. Naturally, in order to vindicate their reputation, the plaintiffs took action, suing, as they were compelled to—and innocent though he was—the unfortunate builder. The evidence brought forward was certainly conclusive, one of the witnesses being no less a person than Mr. Price, the Manchester City Architect, who had been asked by the judge to inspect the goods, this, after they had been lying on the site for ten months, and exposed to all sorts of weather. Mr. Price stated in his evidence that even after that period he found 80 per cent. of the bricks sound and satisfactory 'seconds.' In view of this evidence from so disinterested a party, whose knowledge and experience everybody admits, the issue of the case was made certain."

PRESENTATION.

A few days ago, at the works of Messrs. Comyn Ching & Co., Ltd., of Castle-street, Long Acre, W.C. (ironmongers and brass-founders, heating, lighting, and ventilating engineers), the managing director, Mr. Samuel Chitty, was presented with an illuminated address congratulating him on his completion of fifty years with the firm. Commencing in 1860 as a boy assistant in the factory, Mr.

Chitty rose to the management of both factory and warehouse, becoming partner with the late Mr. Comyn Ching in 1875, and on the firm being converted into a private limited company in 1902 he was appointed managing director and chairman. Mr. Chitty still takes an active part in the business. The business dates back over 150 years. Inscribed on the address were the names of 114 present employees, five with over forty years' service, ten over thirty years, eleven over twenty years, and thirty-four over ten years.

CRYSTAL PALACE ENGINEERING SCHOOL.

The "Wilson Premium" for the best paper read before the Crystal Palace Engineering Society during the present session has been awarded by the Council to Mr. R. Hook for his paper on "Narrow Gauge Railways." Other papers read during the session were "Water Engineering," by E. L. Browning; "Aviation," by E. Bayly; and "Canals and Waterways," by B. V. Richardson. The premium was presented to Mr. Hook by Sir Charles Rivers Wilson, G.C.M.G., C.B., late President of the Grand Trunk Railway of Canada, on the occasion of the 112th distribution of certificates of the school on Tuesday, April 12, at which he presided.

THE ROYAL SANITARY INSTITUTE EXAMINATIONS.

At an examination in Sanitary Science as Applied to Buildings and Public Works, held at Blackburn on April 8 and 9, 1910, the following candidate was granted a certificate:—Mr. M. S. A. Lewis (Crewe). At an examination for Inspectors of Nuisances, held at Blackburn on April 8 and 9, twenty-six candidates presented themselves, and eleven candidates were certified, as regards their sanitary knowledge, competent to discharge the duties of Inspector of Nuisances under the Public Health Act, 1875.

ELASTIC PAINT.

Some samples of fabrics coated with an elastic paint have been sent to us by Messrs. Freebury & Co., of Harlesden. It is claimed that this paint can be applied to any kind of surface, but is especially suitable for use as a rust-proof and waterproof paint for machinery and every description of ironwork. The dried paint on the fabrics submitted to us is certainly very flexible and adhesive, and we have no doubt that the paint will be particularly useful for covering surfaces from which a brittle paint would soon become detached.

HAMPSTEAD HEATH PROTECTION SOCIETY.

From the thirteenth annual Report of the Hampstead Heath Protection Society we learn that the Society have been in correspondence with the London County Council, with reference to the deposit of clay and other builders' rubbish on the Heath, and other matters. Several letters have passed between the Committee and the Council on these subjects. "On April 29, 1909, some members of the Committee accompanied Mr. Reynolds, Deputy Chairman of the Parks and Open Spaces Committee, and Mr. Palmer, the Heath Superintendent, on an inspection of certain parts of the Heath, and drew their attention to the localities to which our complaints to the County Council had related. Subsequently, on June 17, your Committee wrote to the London County Council expressing their hope that, as the deposit of clay and other similar materials constitutes an offence against the by-laws of the Council, no arrangements would in future be made by the officials of the Council for the depositing of such materials on any part of the Heath without the express authority and approval of the Parks and Open Spaces Committee, and a full disclosure to that Committee of the terms and conditions of the arrangements proposed, and the scheme suggested by the officials for the disposal of the materials. We, at the same time, drew the Council's attention to a practice which has of late been resorted to by their officials, and which is also an offence against the by-laws of the Council, viz., the cutting of turf from the Heath. This has entailed considerable disfigurement of the East Heath. We suggested that when turf is required for any part of the Heath it should be bought, and not taken from other parts of the Heath without the express authority of the Parks and Open Spaces Committee being first obtained. We also informed the County Council that our attention had been drawn to the cutting down of a large and beautiful birch-tree near to the fir-trees on the Spaniards-road, which, so far as appeared from an inspection of so much of the trunk as remained, was sound and healthy. . . . A resolution having been passed by the Hampstead Borough Council, and forwarded to the London County Council, suggesting that the ponds on the Heath should be made of a uniform depth, and the bottoms cemented, the Hon. Secretaries wrote in November last to the London County Council expressing a hope that this would not be done, as it would completely destroy the amenities and rural aspects of the ponds." Letters in reply from the London County Council are printed in the Report. The proposed work in connexion with the ponds is not to be carried out.

PROPERTY SALES.

Amongst the properties which are now in the market are No. 80, Piccadilly, distinguished by its old-fashioned front; it was the home of Sir Francis Burdett, and the scene of his arrest upon the Speaker's warrant by Coleman, Serjeant-at-Arms, and the patrol, on April 9, 1810, when he was escorted by a squadron of Life Guards to the Tower, after a three-days' tumult in Piccadilly.——No. 4, Conduit-street, on the Conduit Mead Estate of the Corporation of London, of which the lease is renewable in perpetuity every fourteen years at a fine of 30*l.* 12s. 6d., and No. 5, Stratford-place, built by Robert Adam, on the same estate, and held from the Corporation upon a lease renewable for ever at a rent of 6*l.*, and a fine of 30*l.* on each renewal.——Pitt House, at North End, Hampstead, where the statesman, Earl of Chatham, lived for a while in close retirement.——Grovelands, Winchmore Hill, with a finely-timbered park of 306 acres, formerly portion of the Enfield Chase, and a mansion built after Nash's designs.——Garrick Villa, Hampton, which, being then called "Fuller's House," was sold by Lacey Primatt in 1754 to David Garrick, who employed Robert Adam to build a new front, with a portico, to the house, and caused the grounds to be laid out under his own directions. In the "Shakespeare temple," at the edge of the lawn, Garrick enshrined Roubiliac's statue of the poet, which he bequeathed to his wife for her life, and then to the British Museum. Some of the interior decoration of the house was executed by Hogarth, whose four pictures of "The Election" were bought for 1,650 guineas by Sir John Soane at the dispersal of the effects after Mrs. Garrick's death, in 1823. Dr. Johnson suggested the making of the tunnel under the public road, to connect the grounds with the lawn by the riverside.

THE "TIPPIT" FIRE.

In reference to the notice in our issue for April 9 of the new catalogue of the Lift Fireplace Company, the firm write as follows:—"The description you give of the loose cast-iron grating is rather misleading. You say that 'the front part of the grating is pivoted to the back part.' This is not correct, and a reader would infer from your description that there is no novelty in the invention."

PATENT OFFICE ARBITRATION CASE.

Mr. Howard Chatfeild Clarke, F.S.I., F.R.I.B.A., has issued his award as arbitrator in the case of Cohen *v.* H.M. Commissioners of Works. It was a claim for compensation in respect of Nos. 13, 14, 15, 16, and 17, Furnival-street, and four houses in Tooks-court, Holborn Bars. The property, which had an agreed area of 7,797 sq. ft., was required for the extension of the Patent Office. Sir Edward Clarke, K.C., and Mr. Le Riche appeared for the claimants; and the Attorney-General and Mr. Lowenthal for the Crown. On behalf of the claimants, Mr. C. A. Lang (Messrs. Jones, Lang, & Co.) estimated the ground-rental value of the property at 1,060*l.* 7s. Having allowed a year's peppercorn during rebuilding, he capitalised it at twenty-five years' purchase, 26,500*l.* With the customary allowance for compulsory sale, his total was 29,160*l.* He also presented an alternative valuation of 34,680*l.*, on the basis of the income derivable from buildings which might be erected on the site. Mr. B. I'Anson Breach, member of the Council of the Auctioneers' Institute (Messrs. Farebrother, Ellis, & Co.), and Mr. H. H. Collier (Messrs. H. H. Collier & Madge) also gave evidence. The experts for the Crown were Mr. Alexander R. Stenning, F.R.I.B.A., President of the Surveyors' Institution (Messrs. Stenning & Partners), Mr. W. Vincent Jull (Messrs. Horne & Co.), and Mr. Howard Martin (Messrs. Thurgood & Martin), Past-President of the Surveyors' Institution. The valuation of the last named amounted to 19,919*l.* Mr. Howard Chatfeild Clarke has awarded the claimants the sum of 23,937*l.*—*Times.*

AYR AULD BRIG.

The restoration of Ayr Auld Brig, which has been going on more or less continuously for the last three years, has now been practically completed. The first serious trouble with the bridge in recent times began about six years ago, when a somewhat alarming report as to the stability of the structure was made by Mr. B. Hall Blyth, C.E., Edinburgh, who was called in by the Town Council of Ayr to examine it. This led to the bridge being closed. A further examination of the bridge from foundation to parapet by various experts showed that the foundations were unstable, and that the whole structure otherwise was in a dilapidated condition; and there seemed to be some danger of its collapsing and being carried down the river. The whole preservative work has been carried out under the personal superintendence of Mr. W. S. Wilson, C.E., Glasgow, and Mr. Morris, with whom was associated Mr. John Young, Ayr Burgh Surveyor, as representing the Town Council. The principal part of the engineer's specification was (1) to grout the whole structure with Portland cement under a pressure of 15 lb. to 20 lb. per square inch; (2) to underpin the piers and abutments to a depth of 8 ft. to 10 ft. with blue brick in cement; (3) to strip off the roadway of the bridge and strengthen the arches and haunches with a layer of concrete from 1 ft. to 3 ft. thick. These operations, which are entirely out of sight now that the work is finished, account for a considerable part of the outlay. Some interesting adjuncts of the bridge have been brought to light during the progress of the operations in the shape of the remains of the old gatehouse or watch-house on the east side of the bridge, at the place where the arched bridge gate spanned the roadway at the north end, and a part of the old causeway on the east side of the north approach.

Law Reports.

ACTION AGAINST BUILDERS.

THE contract for the electric lighting and power supply for the Piccadilly Hotel was before Mr. Justice Hamilton in the Commercial Court this week, in an action by Mr. Sidney Alexander Boulton, who, as the assignee of a sum alleged to be due to Messrs. Blackburn, Starling, & Co., sued the defendants, Messrs. Perry & Co., the well-known builders and contractors, for 2,557*l.*, the amount certified by Mr. E. W. Bowles, the engineer under the contract between the Hotel Company and Messrs. Perry & Co., to be due to Messrs. Blackburn, Starling, & Co. as the final instalment of payments for the electric lighting and power installation at the hotel.

Defendants pleaded that it was a term of the contract between them and Messrs. Blackburn, Starling, & Co. that defendants should only be liable to pay when they received the money from the Hotel Company. To this plaintiff replied that if defendants did not receive payment it was because they had departed from the terms of their contract, and were thus unable to get certificates for payment.

Mr. Scrutton, K.C., and Mr. M. Hill appeared for the plaintiffs; and Mr. Simon, K.C., and Mr. Colam for the defendants.

At the conclusion of the arguments of counsel, Mr. Justice Hamilton, in giving judgment, said plaintiff made two points—first, that a condition precedent was fulfilled prior to the commencement of the action; secondly, that by delivering a reply subsequent to the decision on the preliminary issue they contended that if that condition precedent had not been fulfilled defendants themselves were responsible for it either by omitting the duty of procuring its fulfilment, or by interfering so as to prevent its fulfilment, and therefore the question now came to be tried independently of any question as to the performance of the condition precedent. Plaintiff said there were two branches—the sum of 1,686*l.*, to which alone the question of condition precedent could apply, and 1,066*l.* for extras, for which Perry & Co. would be liable to Blackburn, Starling, & Co. Defendants invited him to come to the conclusion that the contract was varied by consent, but he did not think he could do that on the evidence, and he must proceed on the footing of the formal contract. Plaintiff said that the condition precedent was performed because the sum paid for the electrical work had been 17,464*l.* But this was not a question of money had and received by Messrs. Perry & Co. for Messrs. Blackburn & Co.; it was merely a question of whether the payments had been received of the amount mentioned in the engineer's certificate. He came to the conclusion that it was the business of Messrs. Blackburn & Co. to get the certificates, and not that of Messrs. Perry & Co., and he found no evidence of obstruction, interference, or hindrance on defendants' part. That disposed of the sum of 1,686*l.* As to the sum of 1,066*l.*, which referred to the extras, he held there was no more ground for saying the condition precedent was fulfilled on that point than on the other. The result would be that there would be judgment for the defendants, with costs.

A stay of execution was granted with a view to an appeal.

CITY PREMISES AND THE WATER RATE.

A POINT of considerable importance with regard to water rates in the metropolitan area was decided by a Divisional Court, consisting

of Justices Darling and Bucknill, this week, on the appeal of the plaintiffs in the case of the Metropolitan Water Board *v.* G. P. & J. Baker, Ltd., from a decision of Deputy-Judge Lush at the Westminster County Court.

In this case the plaintiffs claimed from the defendants 66*l.* 8s. 6d., the amount of water rate they alleged to be due from them in respect of premises which were occupied by them in the City. The facts were these:—The premises consisted of what were originally two blocks of buildings, one being Nos. 3-9, Warwick-square, and the other being an annexe at the back of Warwick-square, which was built by the defendants in 1905, and was known as No. 4A, Newgate-street. Most of these buildings were originally separate houses, and No. 9, Warwick-square, which was situated at the left-hand corner, had been a separate house. Between all the properties there were communicating doors and two entrances into the Warwick-square end of the property, one at No. 9, and the other into Nos. 3, 4, and 5. There was also a separate entrance into the ground floor of Nos. 6, 7, and 8, Warwick-square. The supply of water to the premises was furnished by means of a communication pipe leading into No. 9, Warwick-square only, and no pipe or other apparatus connected the supply with any other part of the defendants' premises. The water supplied by the plaintiffs was used for drinking purposes only, the rest of the water used on the premises being obtained from a well in Nos. 3-5, Warwick-square. The water from No. 9 was, however, conveyed by hand to other parts of the premises. Plaintiffs contended that the defendants, in these circumstances, were liable to pay water rate based upon 5 per cent. of the rateable value of the whole of their premises, on the ground that by throwing all the premises into one they had constituted them "a house or building occupied as a separate tenement" within sect. 8 of the Metropolitan Water Board (Charges) Act. The case for the defendants, however, was that No. 9, Warwick-square, to which the water was actually supplied, was a separate tenement, and that its condition had not been changed merely by reason of the fact that it communicated with the other parts of the defendants' premises. The deputy County Court judge upheld the defendants' contention, and decided that the defendants were only liable to pay water rate based upon 5 per cent. of the rateable value of No. 9, Warwick-square alone. Hence the present appeal of the Metropolitan Water Board.

At the conclusion of the arguments of counsel, their lordships held that upon the evidence there was evidence to support the finding of fact of the deputy-judge. The deputy-judge's judgment was therefore affirmed, and the appeal dismissed with costs.

Mr. A. B. Shaw (instructed by Mr. Walter Moon) appeared for the appellants; and Mr. Drucquer (instructed by Messrs. Jenkins, Baker, Reynolds, & Co.) for the respondents upon the appeal (the defendants).

THE LONDON COUNTY COUNCIL AND ILLUMINATED ADVERTISEMENTS.

A POINT of considerable importance under sect. 73 of the London Building Act, 1894, came before a Divisional Court of King's Bench last week, when Mr. Daldy (instructed by Mr. Edward Tanner) applied *ex parte* on behalf of the London County Council for a rule *nisi* for a mandamus directed to a metropolitan police magistrate calling upon him to state a case for the opinion of the Court.

Mr. Daldy stated that a summons had been taken out by the Council against Messrs. W. Sandorides & Co., Ltd., under sect. 73 of the London Building Act, 1894, in regard to an illuminated sign on the premises of the company in Oxford-street. The sign, which was a considerable size, projected about 3 ft. from the building. The magistrate, although finding that the sign was a projection, was of opinion that, having regard to the decisions in the cases of Hull *v.* London County Council and London County Council *v.* Schewzik, the erection in question did not come within sect. 73, and he therefore dismissed the summons. The learned counsel contended that the sign really formed part of the building, and that the two decisions in question did not apply to the case. He further submitted that the learned magistrate had not properly directed his mind to the question, whether the sign was a projection forming part of the building.

The Lord Chief Justice, in giving judgment, said that the Court would grant the rule. It might perhaps turn out that the learned magistrate had decided the question as being one of fact, with a perfect appreciation of the question of law involved. In his (the Lord Chief Justice's) opinion, the true construction of paragraph 8 of sect. 73 of the Act was that it dealt with parts of a building, and not with mere projections from a building. He doubted Mr. Daldy's suggestion that the learned magistrate had not considered the question whether the projection did form part of the building. As, however, it was important that there should be no misunderstanding about it, the rule would go.

APPEAL BY THE STOCKPORT CORPORATION.

THE case of the Stockport Corporation *v.* Rollison, which came last week before a Divisional Court of King's Bench, consisting of the Lord Chief Justice and Mr. Justice Channell, raised the question whether the defendant had the right of erecting without permission an advertisement hoarding in Wellington-road, Stockport, in alleged contravention of the provisions of the local Act, the case coming before the Court upon the appeal of the Corporation from a decision of the magistrates dismissing a summons taken out by the Corporation against the defendant for the alleged offence upon the ground that in their opinion the hoardings were not in the street.

Mr. Macmorran, K.C., on behalf of the defendant (respondent), contended that, having regard to the fact that the hoarding was erected behind a fence 6 in. back from the pavement, the erection could not be regarded as being contrary to the provisions of the Act.

In the result, however, their lordships allowed the appeal, and remitted the case to the magistrates, with an intimation that, in their opinion, the erection of the hoarding without permission was contrary to the provisions of the Act.

IMPORTANT BRICK CASE:

STANDARD BRICK COMPANY *v.* MOORE.

AN action for breach of contract in connexion with the erection of an Eccles school was heard at Manchester Assizes on March 11 and 12, when Henry Thomas Kenyon, of Prestwick, trading as the Standard Brick and Terra-cotta Company, at Buckley, Cheshire, claimed damages from Mr. J. F. Moore, builder and contractor, of Eccles.

Plaintiff was represented by Mr. Sutton and Mr. Gordon Hewart, and defendant by Mr. Langdon, K.C., and Dr. Atkinson, whilst Dr. Eastham was briefed for the Eccles Corporation, who were made third parties in the action.

The position was that the defendant had been engaged by the Eccles Corporation to build a school in Beech-street, and he made a contract with the plaintiff for the supply of a number of bricks. The clerk of the works expressed disapproval of the quality of these bricks, and as the result the contract was cancelled by the defendant.

The plaintiff held that the bricks were as good as any that could be secured at the rate of 7*l.* per 1,000.

The manager at Manchester for the plaintiff, Mr. Bagshaw, who was being cross-examined about damages, declared that he did not want any damages, but to put himself right with the building world, and that was all.

It was decided that if the defendant was found to be liable the damages should be fixed at 10s. per 1,000.

The jury found a verdict for the plaintiff.—*Master Builder and Associations Journal.*

Patents.

APPLICATIONS PUBLISHED.*

3,827 of 1909.—Charles Allan Jones: Self-supported ladders, steps, and other such articles.

6,607 of 1909.—Friedrich Schiller: Blocks for reinforced concrete floors.

10,152 of 1909.—Frank Shore and Thomas Shore: Fastening means for sash windows, slidable shutters, or the like.

12,788 of 1909.—Henry Tuke: Brick machines.

12,947 of 1909.—William John Gibson: Domestic fireplaces.

14,103 of 1909.—Robert Green: Specially-constructed pipe to form the outfall end of a drain.

17,337 of 1909.—Friedrich Pugh: Movable glass panels or windows for wind screens, window panes, and the like.

17,804 of 1909.—Arthur Davies: Guard or shield for air inlets and ventilators.

19,997 of 1909.—Hudson Earle: Colour-washes for plaster, cement, and other surfaces.

21,037 of 1909.—Henry Lyman Fish: Fire-proof shutters, curtains, and the like.

22,820 of 1909.—Clemens Graaff and Hans Mikorey: Movable aspiration arrangements for colour-diffusing plants.

26,381 of 1909.—Lester Godfrey Wilson: Fire-resisting shutters.

26,827 of 1909.—Nils Anthon Holström: French windows.

27,229 of 1909.—Wilhelm Fricke: Window-sills.

27,366 of 1909.—Hudson Earle: Colour-wash for application to plaster, brickwork, and other surfaces.

27,572 of 1909.—Henri Haeffely: Mode of and means for fixing slates or tiles.

* All these applications are in the stage in which opposition to the grant of a patent upon them can be made.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

April 2. — By THORNBORROW & Co. (at Keswick).

Keswick.— Penrith-rd., Cherry Tree House, Burnside, Brookfield, Fernleigh and two pieces of land, f.	£1,450

April 4.—By WILKINSON, SON, & WELCH (at Brighton).

Brighton.—25, Chatham-pl., and plot of land, f.	600

April 5.—By WM. CLARKSON.

Manor Park.—60, 62, 64, 66, and 72, Shrewsbury-rd., u.t. 71¼ yrs., g.r. 27*l.* 10s., w.r. 182*l.*	855

By FREDERICK WARMAN.

Wood Green.—Marlborough-rd., f.g. rents 61*l.*, reversion in 70 yrs.	1,040

April 6.—By FRANCIS DOD & Co.

Stoke Newington.—117, Church-st. (s.), f., e.r. 45*l.*	410

By DUNSTAN & BALLS.

Streatham.—41, Penwortham-rd., u.t. 91 yrs., g.r. 6*l.* 10s., y.r. 34*l.*	275

By FOSTER & CRANFIELD.

Euston-road.—Nos. 394 and 396 (s.), f., y.r. 320*l.*	5,250

By HILLYER & HILLYER.

Tottenham.—1, 2, and 3, South-gr., u.t. 52 yrs., g.r. 18*l.* 10s., w. and e.r. 91*l.*	225
15, Whitley-rd., f., e.r. 38*l.*	500
6, Stamford-rd., u.t. 52 yrs., g.r. 3*l.* 10s., w.r. 31*l.* 4s.	145

By E. & S. SMITH.

Tottenham. — 163, Northumberland-pk., u.t. 40 yrs., g.r. 4*l.* 10s., y.r. 24*l.*	160

By FRED VARLEY & SON.

Finsbury Park.—10, Finsbury Park-rd., u.t. 56½ yrs., g.r. 8*l.* 2s., e.r. 55*l.*	425

By NICHOLAS (at Pinner).

Pinner.—Moss-la., building land, 3 a. 0 r. 16 p., f.	2,150

By R. W. DENYER & Co. (at Snodland).

Snodland, Kent.—Malling-rd., Pleasant View and woodlands, f.	450

April 7.—By C. RAWLEY CROSS & Co.

Shepherd's Bush.—122, Uxbridge-rd. (s.), f., y.r. 160*l.*	2,500
16, Poplar-gr., u.t. 66½ yrs., g.r. 6*l.*, y.r. 48*l.*	350
138, Percy-rd., u.t. 64 yrs., g.r. 7*l.*, e.r. 40*l.*	300
Acton.—46, Strafford-rd., f., p.	300

By NEWSON & SHEPHARDS.

Pentonville.—13, Percy-circus, u.t. 22 yrs., g.r. 6*l.*, e.r. 60*l.*	150
Hackney.—21, Southboro'-rd., u.t. 32 yrs., g.r. 5*l.*, y.r. 32*l.*	215
Caledonian-road.—Nos. 83 and 87, u.t. 24½ yrs., g.r. 16*l.*, y.r. 83*l.* 12s.	375
Islington.—26 to 32 (even), Windsor-st., c., w.r. 124*l.* 16s.	830
Stratford.—58 Buxton-rd., f., e.r. 26*l.*	255
Barnsbury.—32, Copenhagen-st., f., w.r. 91*l.*	360
Holborn.—90, Hatton-gdn., 37 and 37A, Charles-st. (s.), f., gross rentals 616*l.* 15s.	6,000
Holloway.—30, 32, and 34, Hornsell-rd., u.t. 75 yrs., g.r. 23*l.* 5s., y.r. 109*l.* 10s.	765
Streatham.—269, Mitcham-la. (s.), u.t. 91½ yrs., g.r. 7*l.*, y.r. 40*l.*	330

By STIMSON & SONS.

Kennington.—Church-st., etc., f.g.r. 24*l.* 13s., reversion in 14 yrs.	1,310
Peckham.—Commercial-rd. (Albion p.h.), f.g.r. 15*l.*, reversion in 30 yrs.	635
Peckham Park-rd., f.g.r. 14*l.* 11s. 8d., reversion in 32 yrs.	530
Camberwell.—Bushey Hill-rd., plot of land, f.	130
Dulwich.—Martell-rd., f.g. rents 36*l.*, reversion in 87 yrs.	800
Tritton-rd., f.g. rents 34*l.*, reversion in 87 yrs.	810
Hampstead.—Cotleigh-rd., f.g.r. 8*l.* 10s., reversion in 88 yrs.	205
Dalston.—3 and 4, Albion-sq., u.t. 29 yrs., g.r. 14*l.*, y.r. 83*l.*	400
Edmonton.—Fore-st., The Surprise Stores (off-licence), c., y.r. 80*l.*	1,000
Old Kent-road.—1 and 2, Emily-rd.; 1 and 2, Rose-cottages, f., w.r. 104*l.*	755
Tooting.—34, Huron-rd., u.t. 89 yrs., g.r. 8*l.* 8s., p.	450

April 8.—By FERRIS & PUCKRIDGE.

Walthamstow.—2, 4, and 6, Chancer-rd., u.t. 89 yrs., g.r. 12*l.* 12s., w.r. 66*l.* 6s.	120

By W. B. HALLETT.

Wallington.—3 to 11 (odd), Melbourne-rd., and range of stabling, f., y. and w.r. 142*l.*	925
Walton-on-the-Naze.—19, 21, and 23, Newgate-st. (s.), f., p.	245
Notting Hill.—91, Oxford-gdns., u.t. 65 yrs., g.r. 10s., e.r. 80*l.*	545
Camberwell.—2A, Avenue-rd. (s.), f., y.r. 55*l.*	920

By T. B. WESTACOTT & SONS.

Regent's Park.—55, St. George's-rd., f., y.r. 46*l.*	600

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xiv.; Auction Sales, xxii.

Certain conditions, beyond those given in the following information, are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bonâ-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competitions.

APRIL 29. — **Pontefract.** — COUNCIL SCHOOL.—The Education Authority invite competitive designs from architects practising in Yorkshire for the erection of an elementary school. Conditions of competition and plan of site can be obtained from Mr. W. Haddock, Town Clerk, on payment of 1*l.* 1s.

APRIL 30.—**Shardlow.**—SEWERAGE, ETC.—Shardlow R.D.C. desire to provide for the sewerage and sewage disposal of the contributory places of Spondon and Breaston, and they invite competitive schemes. Competitors to supply plans, sections, specification, detailed report, and estimate of the probable cost, which are to be delivered at the office of Mr. J. W. Newbold, Clerk to the Council, Becket-street, Derby.

* MAY 2. — **Stockport.** — LIBRARY. — The County Borough of Stockport invite designs for library. See advertisement in this issue for further particulars.

MAY 31. — **Karachi.** — MUNICIPAL OFFICE. — **The Municipality of Karachi invite elevation designs and detailed plans and estimates for a new Municipal Office. For further particulars see advertisement in our issue of December 25.**

JUNE 15. — **Acton.** — NEW SCHOOLS. — The Acton U.D.C. Education Committee invite designs for new schools at Rothschild-road. For further particulars see advertisement in our issue of March 12.

AUGUST 23.—**Navan.**—COUNTY OFFICES.—Meath C.C. invite architects in Ireland to submit plans and specifications for the building of new County Offices at Navan. Copies of Sites Committee Report can be had on application from the Secretary, Meath C.C., Navan.

* NO DATE.—**Birkenhead.**—RECEIVING HOME.—The Guardians of the Birkenhead Union invite designs for proposed receiving home for children in Birkenhead. See advertisement in this issue for further particulars.

* NO DATE.—**Edinburgh.**—DESIGNS FOR A HALL.—The Edinburgh Corporation invite competition designs for the erection of a new hall in Lothian-road, Edinburgh. See advertisement in this issue for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

APRIL 16. — **Cilfynydd.** — RENOVATIONS. — Making renovations, etc., to Moriah Welsh Independent Chapel, Cilfynydd. Plans, etc., can be obtained at the office of the architect, Mr. Philip J. Jones, Church-street, Pontypridd.

APRIL 16. — **West Stanley.** — BANKING PREMISES, ETC.—Proposed new banking premises, five shops, entertainment hall, etc., for Mr. Jonathan Green. Names to Mr. John J. Eltringham, architect and surveyor, Derwent-street, Blackhill.

APRIL 18. — **Rhymney.** — DRILL HALL.—The Monmouthshire Territorial Force Association invite tenders for the erection of a new drill hall at Rhymney for the 1st Battalion the Monmouthshire Regiment. Plans, etc., may be seen, and copies of the quantities obtained, on payment of 1*l.* 1s., at the offices of the Association, 35, Stow-hill, Newport, Mon., or at Ty Mawr, Rhymney.

APRIL 19. — **Bedwas.** — POLICE-STATION.—Monmouth Standing Joint Committee invite tenders for the erection of a police-station at Bedwas. Plans, etc., may be seen at the office of Mr. William Tanner, County Surveyor, Newport, and copies of the quantities obtained on payment of 1*l.* 1s.

APRIL 19.—**Cushendall.**—ERECTION OF DISPENSARY RESIDENCE AND DISPENSARY.—The Board of Guardians of Ballycastle Union invite tenders for the erection of a residence and dispensary. Plans, etc., prepared by Mr. T. J. O'Neill, C.E., may be seen at the Boardroom, Ballycastle Workhouse.

APRIL 19.—**Cwmcarn.**—ALTERATIONS, ETC. — Alterations and additions to the Cwmcarn Hotel, Cwmcarn, Mon., for Messrs. Lloyd & Yorath, Ltd. Drawings may be seen, and bills of quantities obtained, at offices of Mr. H. J. Griggs, A.R.I.B.A., architect, Metropolitan Bank-chambers, Newport, Mon., on payment of 2*l.* 2s.

APRIL 19. — **Kingston-upon-Thames.** — ALTERATIONS, ETC.—The Property Committee of the Corporation invite tenders for alterations and additions at the Municipal Offices in accordance with the drawings, etc., prepared by the Borough Surveyor, Mr. R. Hampton Clucas, which can be seen at his office.

APRIL 19. — **Rhondda.** — WALL.—Rhondda U.D.C. invite tenders for (1) the rebuilding of the masonry boundary wall at the Fever Hospital, Ystrad-Rhondda; (2) the improvement of Cornwall-road, Williamstown. Plans, etc., may be seen, and forms of tender obtained, at the Council Offices, Pentre, on payment of a deposit of 1*l.* 1s. for each contract.

APRIL 20. — **Barnsley.** — INN.—Pulling down the Dearne Grove Inn and three adjoining cottages, Hoyle Mill, Barnsley, and for rebuilding the inn, with stabling, etc., for Clarkson's Old Brewery, Barnsley, Ltd. Plans, etc., may be seen, and quantities obtained, on application to Messrs. R. & W. Dixon, architects, 5, Eastgate, Barnsley.

APRIL 20.—**Budleigh Salterton.**—BILLIARD-ROOM. —New billiard-room and various alterations and additions at the Club premises. Drawings, etc., may be obtained from Mr. Ernest E. Ellis, architect, 44, Polsloe-road, Exeter, and Exmouth.

APRIL 20.—**Cavan.**—ROOF, ETC., WORKS.—The Joint Committee of Management of Co. Cavan Infirmary invite tenders for repairs to roofs, masonry, and cementing the front of the surgeon's residence, in accordance with the architect's specification, which may be inspected at the Infirmary.

APRIL 20. — **Delph.** — MILL.—Tenders are invited for the erection of a two-story mill at Gatehead Mills, Delph. Plans may be seen at the mill, and bills of quantities obtained on application to the architect, Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

APRIL 20. — **Hemsworth.** — HOUSES.—The erection of sixty-five dwelling-houses, etc., at Fitzwilliam Village, Hemsworth, for the South Kirkby, Featherstone, and Hemsworth Collieries, Ltd. Forward to Messrs. Garside & Pennington, architects and surveyors, Pontefract and Castleford, a deposit of 1*l.* 1s. for bills of quantities.

APRIL 20. — **Kinsale.** — COTTAGES. — The Kinsale R.D.C. invie tenders for the erection of fifty-five cottages. Specification, etc., to be seen at the Council Office.

APRIL 20. — **Lazonby.** — WAREHOUSE.—New warehouse, etc., for the Lazonby and District Co-operative Society, Ltd. Plans, etc., may be seen at the Society's Office, Lazonby.

APRIL 20. — **Netherton.** — HOMES. — Five cottage homes at Netherton. Plans, etc., may be seen, and bills of quantities obtained, at office of Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

APRIL 20.—**Shelley.**—CONVERSION OF OFFICES INTO LATRINES.—Kirkburton District Education Subcommittee invite tenders for above. Specifications to be had on application to Mr. William Wood, Divisional Clerk, Penistone.

APRIL 21.—**Evesham.**—BANDSTAND.—The Evesham T.C. invite tenders for the provision and erection of a ferro-concrete bandstand on the Public Recreation Ground at Evesham. Plans, etc., can be inspected at the offices of Mr. H. S. Harvey, the Borough Surveyor, at the Town Hall, Evesham.

APRIL 21. — **Glass Houghton.** — HOTEL.—Erection and completion of the new West Riding Hotel at Glass Houghton, near Castleford. Names to Mr. Ernest E. Pickersgill, architect, Brewery Offices, Pontefract.

APRIL 22.—**Castleblayney.**—CONVENT. — Erection and completion of new Convent of Mercy, Castleblayney, for the Very Rev. P. Canon Callan, P.P. Bills of quantities have been prepared by Mr. Acheson Ferguson, Scottish Provident-buildings, Belfast, and can be obtained from him on deposit of 1*l.* 1s.

APRIL 22.—**Kendal.**—TWO SEMI-DETACHED COTTAGES, COLIN FIELD-LANE.—Tenders are invited for the erection of the above, for Mr. C. H. Clegg. Plans may be seen, and quantities, etc., obtained, at office of Mr. John F. Curwen, F.R.I.B.A., F.S.A., architect and sanitary engineer, 26, Highgate, Kendal.

APRIL 22.—**Natland.**—RESIDENCE.—Works required (mason and slater's work excepted) in the erection of a residence at Natland, for Mrs. Page. Plans, etc., may be seen, and bills of quantities, etc., obtained, on application at office of Mr. Stephen Shaw, F.R.I.B.A., architect, 45, Highgate, Kendal.

APRIL 22.—**Salendine Nook.**—HOUSE.—Erection of a detached dwelling-house at Salendine Nook. Plans may be seen, and quantities obtained, from Mr. Fred B. Crowther, 26, Snow-lea, Longwood.

APRIL 22.—**Wath-upon-Dearn.**—SCHOOL WORKS.—The West Riding Education Committee invite tenders for erection of new senior mixed department (builder, joiner, slater, plumber, plasterer, painter) at Victoria Provided School. Plans may be seen, and specifications, etc., obtained, on application to the Education Architect, County Hall, Wakefield. A sum of 1*l.* must be sent by separate letter to the West Riding Treasurer, County Hall, Wakefield.

APRIL 23.—**Ellesmere Port.**—POLICE BUILDINGS. —Tenders are required for the erection of new county police buildings at Ellesmere Port. Plans, etc., can be seen at the office of Mr. H. Beswick, F.R.I.B.A., County Architect, Chester, and quantities obtained on deposit of 1*l.*

APRIL 23.—**Monknash.**—FARMHOUSE BUILDINGS.—Glamorgan C.C. invite tenders for alterations and additions to the existing farmhouse, buildings, and outbuildings, Mill Farm, Monknash. Plans, etc., may be seen at the County Police-station, Llantwit Major, and at offices of Mr. T. Mansel Franklen, Clerk of the County Council, Glamorgan County Council Offices, Westgate-street, Cardiff.

APRIL 25. — **Birkenhead.** — UNDERGROUND CONVENIENCE.—The Corporation invite tenders for the construction and completion of an underground convenience and lavatory in the Market-square and Hamilton-street. Plans, etc., may be seen, and form of tender, etc., obtained at the office of Mr. Charles Brownridge, M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Birkenhead, upon deposit of the sum of 1*l.*

* APRIL 25.—**East Molesey.**—ALTERATIONS.—Tenders are invited for alterations and additions to manufacturing premises at Creek-road, East Molesey. See advertisement in this issue for further particulars.

APRIL 25.—**Eastwood.**—COWSHED.—The Essex C.C. invite tenders for the erection of a cowshed for eight cows on land adjoining the Council School at Eastwood. Tenders (with plans and specifications) should be sent to the Clerk of the Council, Shire Hall, Chelmsford.

APRIL 25.—**Halifax.**—ALTERATIONS, ETC.—Alterations and additions to the Halifax Golf Club. Plans, etc., may be seen, and bill of quantities obtained, at offices of Messrs. Utley, Hebblethwaite, & Utley, architects, 10, Waterhouse-street, Halifax.

APRIL 25. — **Keady, etc.** — HOUSE, ETC.—Great Northern Railway Company (Ireland) Directors invite tenders for stationmaster's house at Keady and two cottages at Goraghwood. Plans, etc., at the office of Mr. F. A. Campion, Chief Engineer, Amiens-street Terminus, Dublin, or copies of them at the office of the District Engineer, Belfast.

APRIL 25. — **Keighley.** — FOUNDRY.—Erection of a foundry and machine works at Strong Close, Keighley. Drawings may be seen, and bill of quantities obtained, at office of Messrs. Moore & Crabtree, architects, York-chambers, Keighley.

APRIL 25. — **Senghenydd.** — HOUSES.—Erection of sixteen houses, including sewers and lanes, at Senghenydd (Gwernymilwr Estate). Plans, etc., may be seen at offices of Messrs. Arthur Ll. Thomas and Gomer S. Morgan, architects, Church-street-chambers, Pontypridd.

APRIL 26. — **Abercynon.** — COTTAGES.—Erection of sixteen or more cottages at Abercynon, for Messrs. the Goitre-Coed Fawr Building Club. Plans, etc., may be seen at the office of Mr. William Dowdeswell, architect, Treharris.

* APRIL 26.—**Birkenhead.**—SORTING OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for erection of a sorting office at Rock Ferry, Birkenhead. See advertisement in this issue for further particulars.

APRIL 26.—**Cholmsford.**—WORKS AT CATTLE MARKET. —The T.C. invite tenders for the execution of works in their cattle market, viz.:—(1) Construction of a roof over Messrs. Rodd & Slipper's stand, (2) construction of a roof over Messrs. Offin & Rumsey's auction-ring, (3) erection of a small horse-shed of corrugated iron, and (4) fixing new manger in, and repairing existing horse-shed. Specification, etc., may be obtained, and the plans may be inspected, at the Borough Surveyor's Office, 16, London-road.

APRIL 26.—**Durham.**—HOUSE.—Plans, etc., at City Accountant's Office, 6, Saddler-street, Durham.

APRIL 26.—**Ilford.**—OFFICES.—Ilford U.D.C. invite tenders for the erection of a block of offices at the Electricity Works, Ley-street, Ilford. Copies of plans, etc., may be obtained on application to Mr. H. Shaw, M.Inst.C.E., Engineer and Surveyor to the Council, Town Hall, Ilford, on payment of a deposit of 2*l.* 2s.

* APRIL 27.—**Crewe.**—SORTING OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for a sorting office at Crewe Station. See advertisement in this issue for further particulars.

APRIL 27.—**Dublin.**—BUILDING.—The Committee of Management of Queen's County Infirmary invite tenders for the erection of a building and other alterations in accordance with the plans, etc., to be had at Infirmary.

* APRIL 27.—**London, S.W.**—SUBWAY.—The Commissioners of H.M. Works and Public Buildings invite tenders for construction of a subway beneath Orange-street, Westminster, S.W. See advertisement in this issue for further particulars.

APRIL 27. — **Wigan.** — OPERA HOUSE, ETC. — For People's Palace and Opera House for the William Benson Theatre Enterprises, Manchester-chambers, Market-street, Manchester. Plans, etc., from the architects, Messrs. Heaton, Ralph, & Heaton, King-street, Wigan, Lancashire.

* APRIL 30.—**Goodmayes.**—ADDITIONS, ETC.—The West Ham B.C. invite tenders for alterations and additions to Little Heath House, Goodmayes Asylum. See advertisement in this issue for further particulars.

* MAY 1.—**King's Lynn.**—WOOD TOP TO BRIDGE.—Tenders are invited for new wood top to St. Garman's Bridge, King's Lynn. See advertisement in this issue for further particulars.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

* MAY 2.—**London, S.W.**—STABLES.—The Commissioners of H.M. Works and Public Buildings invite tenders for erection of stables in Scotland Yard. See advertisement in this issue for further particulars.

* MAY 2.—**Luton.**—SCHOOL.—The Luton B.C. Education Committee invite tenders for school buildings on Beech Hill, Dunstable-road, Luton. See advertisement in this issue for further particulars.

MAY 4.—**Manor Park.**—COTTAGE.—Wanstead U.D.C. invite tenders for the erection of a foreman's cottage at the Wanstead Sewage Farm, Empress-avenue, Manor Park. Copies of plans, etc., can be obtained on application to the Surveyor, Mr. C. H. Bressey, Council Offices, Wanstead, N.E., on payment of a deposit of 1*l.*

MAY 7.—**Bridgend.**—NEW BOARDROOM AND OFFICES.—Bridgend and Cowbridge Guardians invite tenders for the erection of a new boardroom and offices at the Workhouse. Plans, etc., may be seen, and particulars obtained, at the office of Mr. P. J. Thomas, architect, Bridgend.

* MAY 7.—**Hartlebury.**—SCHOOLS.—The Governors of the Hartlebury Grammar School invite tenders for new schools at Hartlebury. See advertisement in this issue for further particulars.

MAY 9.—**Hastings.**—SCHOOLWORK.—The Education Committee invite tenders (from local tradesmen) for carrying out work in connexion with the construction of a new exit and bridge at Mount Pleasant School. Specifications may be seen, and form of tender obtained, at the office of the Borough Engineer, Town Hall, Hastings.

NO DATE.—**Aislaby.**—COTTAGE.—Cottage at Aislaby for Mr. G. Cass. Drawings, etc., may be seen at office of Mr. A. E. Young, architect and surveyor, 77, Baxtergate, Whitby.

NO DATE.—**Armley.**—EXTENSION.—Erection of extension to works, Canal-road, Armley, for Messrs. J. W. Roberts, Ltd. Names and addresses to Mr. G. Fredk. Bowman, architect, 5, Greek-street, Leeds.

NO DATE.—**Brimington.**—HOUSES.—Erection of two houses at Brimington. Apply to Mr. Tom S. Wilcockson, architect, Chesterfield.

NO DATE.—**Eckington, etc.**—RESIDENCES.—For (1) residence at Eckington, (2) residence at Clowne, and (3) houses at Killamarsh. Plans, etc., at the offices of Mr. W. Cecil Jackson, M.S.A., architect and surveyor, 29, Knifesmith-gate, Chesterfield.

NO DATE.—**Grosmont.**—SHOP.—Altering and part rebuilding of butcher's shop, and other premises adjoining, in Tunnel-road, Grosmont, near Whitby, Yorks, for Mrs. Wm. Duck. Plans may be seen by appointment. Mr. Thomas Dowson, architect and surveyor, 3a, Flowergate, Whitby.

NO DATE.—**Leeds.**—ALTERATIONS.—Alterations of premises in St. Peter's-street, Leeds, for Messrs. A. W. Scarr & Sons, Ltd. Names to Mr. Fredk. W. Rhodes, M.S.A., architect and surveyor, Upper Wortley, Leeds.

NO DATE.—**Leeds.**—HOUSES.—Erection of twenty-two houses off Cardigan-road, Leeds. Names to Mr. Fred. Mitchell, architect and surveyor, 9, Upper Fountaine-street, Albion-street, Leeds (stating trade).

NO DATE.—**Macclesfield.**—ALTERATIONS.—The Governors of the Macclesfield General Infirmary invite tenders for the carrying out of certain alterations at the Infirmary. Full particulars may be obtained on application to the Secretary.

NO DATE.—**Pontllanfraith.**—CHAPEL.—Erection of a chapel at Pontllanfraith, for the trustees of Elim Baptist Church. Apply to Mr. B. L. Roberts, M.S.A., Abercarn.

ENGINEERING, IRON, AND STEEL.

APRIL 19.—**Dunham Massey.**—BRIDGE.—Bucklow R.D.C. invite tenders for taking down Covershaw Bridge, Dunham Massey, and widening existing arch 6 ft., with new parapet walls to both sides. Plans, etc., may be inspected, and forms of tender obtained, on application to Mr. John McD. McKenzie, Mossburn-buildings, Altrincham.

APRIL 22.—**Durham.**—BRIDGE WORKS.—(1) Reconstructing stone bridge, near Durham, with steel girders, 48 ft. span, and masonry abutments, etc.; (2) reconstructing Aldin Grange old bridge (masonry arch, 45 ft. span); and (3) paving road channels, laying concrete kerb and flags in Front-street, Chester-le-Street. Plans, etc., can be seen, and bills of quantities for stone bridge obtained, at the County Engineer's Office, Shire Hall, Durham.

APRIL 22.—**Manchester.**—CONVERTERS.—The Electricity Committee of the Manchester Corporation invite tenders for 5-600 k.w. motor converters or rotary converters and static transformers. Specifications, etc., may be obtained on application to Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester, on payment of a fee of 2*l.* 2*s.* Further particulars can be obtained from Mr. S. L. Pearce, Chief Electrical Engineer, Dickinson-street, Manchester.

APRIL 25.—**Linlithgow.**—RETORT BENCH.—The Directors of the Linlithgow Coal Gas Light Company invite tenders for the erection at their works of retort bench on the regenerative system. Particulars on application to Messrs. R. & G. Hislop, engineers and contractors, Underwood House, Paisley.

APRIL 28.—**London.**—STEELWORK.—The Great Indian Peninsula Railway Company Directors invite tenders for the supply of steelwork for bridges. Specifications, etc., may be obtained at office of Mr. J. I. Berry, Secretary, Company's Offices, 48, Copthall-avenue, London, E.C., on payment of the fee for the specification, which payment will not be returned.

APRIL 31.—**Midhurst.**—AIR-COMPRESSOR PLANT.—Midhurst R.D.C. invite tenders for the supply and installing at their waterworks, near Medhurst, an air compressor, oil engine, and other accessories. Specifications may be obtained from the Council's Surveyor, Council Offices, Midhurst.

MAY 4.—**Cowes.**—BREAKWATER.—The Cowes Harbour Commissioners invite tenders for the construction of a breakwater, 900 ft. in length, on the Shrape in Cowes Harbour, in ferro-concrete (Hennebique system). Plans, etc., may be seen, and form of tender, etc., obtained, from Mr. John W. Webster, engineer, Cowes, I.W.

MAY 7.—**Sale.**—WIDENING BRIDGE.—The Sale U.D.C. invite designs, estimates, etc., for a portion of the widening of Sale Bridge, Sale, in the county of Chester, in reinforced concrete. Full particulars, etc., may be obtained on application to the Engineer, Mr. Henry Mattinson, A.M.Inst.C.E., 55, Piccadilly, Manchester, on deposit of 2*l.* 2*s.*

NO DATE.—**Howden.**—REPAIRING RIVER BANK.—Repairing 100 ft. of river bank in front of the Sloop Inn, Barmby Marsh, near Howden. Mr. A. R. Lake, solicitor, King-street, Wakefield.

NO DATE.—**Rhyl.**—PIER EXTENSION.—Quantities upon application to Messrs. Maxwell & Tuke, architects and engineers, 25, Brazennose-street, Manchester. Enclose with application a cheque for 1*l.* 1*s.* for each or any of the three contracts. Contract No. 1: Widening, etc., the present iron pier, constructing a jetty some 600 yds. long to deep water, all in ferro-concrete. Contract No. 2: Erection, etc., of a new assembly-hall, etc., to be built on terra firma and constructed of brick, etc. Contract No. 3: New dining-room, etc., kiosks, and shelters, constructed principally of wood, steel, and cement.

NO DATE.—**Tow Law.**—TRAMWAY.—Surface tramway near Tow Law, co. Durham. For specification and particulars apply to W441, "Gazette" Office, Middlesbrough.

MISCELLANEOUS.

APRIL 19.—**Stoke-upon-Trent.**—SCAVENGING.—The R.D.C. of Stoke-upon-Trent invite tenders for the removal of ashes and house refuse, and of night soil and contents of cesspools. Specification to be seen on application to Mr. Gilbert McHarg, Inspector of Nuisances, Bucknall; or at the Union Offices, Stoke-upon-Trent.

APRIL 21.—**Runcorn.**—DEMOLITION, ETC.—Runcorn and Widnes Industrial Co-operative Society, Ltd., invite offers for the demolition, clearing the site, and purchase of materials of twenty-four cottages and five shops situate in Mersey-street, Runcorn. The site may be examined on inquiry at the office, Church-street, Runcorn.

* APRIL 26.—**London.**—FURNITURE AND FITTINGS.—The London C.C. invite tenders for supply and fixing of furniture and fittings at the Central School of Arts and Crafts. See advertisement in this issue for further particulars.

APRIL 26.—**Woodford.**—WATERING VAN.—Woodford U.D.C. invite tenders for a street watering van. Particulars can be obtained upon application to Mr. William Farrington, Surveyor to the Council, Council Offices, Woodford Green.

PAINTING, etc.

APRIL 19.—**Edinburgh.**—PAINTING.—The Magistrates and Council invite tenders for painter work at M'Donald-road power-station. Specification may be seen at the office of Mr James A. Williamson, A.R.I.B.A., City-chambers, from whom also schedules of quantities, etc., may be obtained, on personal application.

APRIL 20.—**Burnley.**—WHITEWASHING.—Tenders are invited for whitewashing, etc., the slaughter-houses, lairs, pens, and premises. Specification may be seen on application to Mr. John C. Gaukrodger, Markets Superintendent.

APRIL 23.—**Manchester.**—PAINTING.—The Paving, Sewering, and Highways Committee invite tenders for painting various bridges over canals and rivers in the city. Specification, etc., may be obtained on application at the City Surveyor's Office, Town Hall, Manchester, on payment to the City Treasurer of 2*l.* 2*s.* All cheques or postal orders are to be made payable to the order of the Corporation of Manchester.

APRIL 30.—**York.**—PAINTING, ETC.—York Education Committee invite tenders for painting, colouring, and limewhiting, to be carried out at certain schools during the summer holidays. Specifications may be obtained from Mr. J. H. Mason, Secretary, Education Offices, Clifford-street, York.

MAY 7.—**Stanwix.**—PAINTING.—The Burial Board invite tenders for outside painting, etc., at Stanwix Cemetery. Specifications may be seen, and the work pointed out, on application to the Curator.

ROADS, SANITARY, AND WATER WORKS.

APRIL 16.—**Tow Law.**—SEWERAGE.—The U.D.C. of Tow Law invite tenders for material for and the construction of works for the purification of sewage at Tow Law. Names and addresses to Mr. John Hillary, Surveyor to the Council, Tow Law, accompanied by a deposit of 2*l.*

APRIL 18.—**Blackburn.**—PAVING, ETC.—The Highway Committee invite tenders for excavating, forming, and paving of streets. Plans, etc., may be seen, and all information obtained, upon application at office of Mr. William Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

APRIL 18.—**Preston.**—PAVING, ETC.—The Corporation invite tenders for the works required in levelling, paving, etc., back road behind Cliftonplace, Long-lane, Ashton-on-Ribble. Plan, etc., may be seen, and schedule of quantities and form of tender obtained, at the office of the Borough Surveyor, Town Hall, Preston.

APRIL 19.—**Leith.**—PAVING.—The Provost, Magistrates, and Councillors invite tenders for laying a total of about 140 super. yds. of cement concrete paving at Lane No. 338 Leith Walk. Plans, etc., may be seen, and information obtained, at the Burgh Surveyor's Office, Charlotte-street.

APRIL 19.—**Rishton.**—STREET WORKS.—The U.D.C. invite tenders for labour in sewering, paving, flagging, etc., in Cliff-street (Lord-street to Sloughton-street) and in Danvers-street (Cliff-street to Back Cliff-street West). Plan may be seen, and specification, etc., obtained, on application to the Surveyor at the Council Offices, Brook-street, Rishton.

APRIL 20.—**Arbroath.**—DRAINAGE.—Construction of 200 yds. or thereby of a 3-ft. diameter pipe sewer in Lindsay-street, Arbroath. The drawings may be seen, and specifications, etc., can be obtained from Mr P. C. Smith, Burgh Engineer and Surveyor, Police-chambers, Arbroath, on payment of 1*l.* 1*s.*

APRIL 20.—**Carlisle.**—TARMAC CURLING LINKS.—Tenders are invited by the Carlisle Curling Club for the construction of four Tarmac rinks. Particulars from President, Dr. Donald, Portland-square, Carlisle.

APRIL 20.—**Duffryn Rhondda.**—STREETS, ETC.—Construction of streets and sewers at Duffryn Rhondda, Port Talbot, for Messrs. the Duffryn Rhondda Colliery Company, Ltd. Names to Mr. Frank B. Smith, C.E., Port Talbot, together with a deposit of 2*l.* 2*s.*

APRIL 20.—**Glanllyn.**—ROAD WIDENING.—Glamorgan C.C. invite tenders for the widening and improving of the Cardiff and Pontypridd main road between Glanllyn and Nantgarw. Plans, etc., may be seen, and copies of the bill of quantities obtained, at the Police-station, Taff's Well, and at offices of Mr. T. Mansel Franklen, Clerk of the County Council, Glamorgan County Council Offices, Westgate-street, Cardiff.

APRIL 20.—**Herne Bay.**—TAR PAINTING.—Herne Bay U.D.C. invite tenders for the supply of manual and team labour, materials, and use of tarring plant, etc., required for tarring and dressing carriageways and footpaths. Specifications, etc., can be obtained from Mr. F. W. J. Palmer, C.E., Surveyor to the Council, Town Hall, Herne Bay.

APRIL 20.—**Rochdale.**—PAVING.—The Paving, etc., Committee invite tenders for the paving and sewering, etc., required in Watkin-street, Argyle-street, and Charter-street. Plans, etc., may be seen, and copies of quantities, etc., obtained, at the office of the Borough Surveyor.

APRIL 20.—**South Dublin.**—SEWER ON STILLORGAN-ROAD.—The South Dublin R.D.C. invite tenders for the construction of a sewer, etc., in the Donnybrook portion of the rural district, in accordance with drawings, etc., prepared by the Engineer, Mr. T. J. Byrne, A.R.I.B.A. Drawings, etc., may be inspected at the office of the Rural District Council. Schedule of quantities, etc., may be obtained at the Council's Office.

APRIL 20.—**Southwark.**—COMPRESSED ASPHALT.—The Council of the Metropolitan Borough of Southwark invite tenders for the supply and laying of asphalt. Specification, etc., may be obtained upon application to the Borough Engineer at the Town Hall, Walworth-road, S.E.

APRIL 21.—**Edinburgh.**—SEWER.—The Magistrates and Council invite tenders for the construction of a brick and concrete sewer for the Haymarket district, and a brick and concrete sewer for the Portobello district. Schedules of quantities, etc., may be obtained from Mr. J. Walker Smith, Burgh Engineer, at his office, on payment of a deposit of 1*l.* 1*s.* by crossed cheque, payable to the Burgh Engineer, for each schedule.

APRIL 21.—**Harrogate.**—STREET WORKS.—The Harrogate Corporation invite tenders for private street works required near Market-place. Particulars may be obtained at office of Mr. F. Bagshaw, Engineer and Surveyor.

APRIL 21.—**Hessle.**—SEWERAGE WORKS.—The Hessle U.D.C. invite tenders for the construction of 370 lineal yds. of 12-in. pipe sewer in Swanland-road, Hessle. Plans, etc., may be seen on application at the Parish Hall, Hessle.

APRIL 23.—**Linthwaite.**—ROAD WIDENING.—The West Riding Highways Committee invite tenders for the widening of the Wakefield and Austerlands main road, Linthwaite. Plans may be seen, and bills of quantities, etc., obtained, at the office of Mr. F. G. Carpenter, West Riding Surveyor, County Hall, Wakefield, on payment of a deposit of 1*l.* Cheques, etc., should be forwarded and made payable to the West Riding Treasurer, County Hall, Wakefield.

APRIL 25.—**Penge.**—PRIVATE STREET WORKS.—The U.D.C. of Penge invite tenders for private street works in Kinsdale-road. Plans, etc., may be seen, and copies of the bill of quantities, etc., obtained, on application to Mr. Herbert William Longdin, Surveyor, Town Hall, Anerley, S.E., on payment of 2*l.*

APRIL 25.—**Rothwell.**—SEWER.—Rothwell (Yorks) U.D.C. invite tenders for:—Contract No. 1, the laying of about 583 yds. of deep sewer with 9-in. earthenware pipes, etc.; contract No. 2, the laying of about 197 yds. sewer with 9-in. earthenware pipes, etc. Plans, etc., may be seen, and form of tender, etc., obtained (on deposit of a cheque for 1*l.* 1*s.*, made payable to the Treasurer of the Rothwell U.D.C.), upon application to Mr. J. Southwart, Engineer and Surveyor, Council Offices, Rothwell, near Leeds.

APRIL 25.—**Stevenage.**—TAR PAVING.—The Stevenage U.D.C. invite tenders for tar paving the footpaths; also for paving with tar macadam roadways. A plan of the proposed work can be seen, and copies of the specification, etc., can be obtained, at the offices of the Council in Orchard-road, Stevenage.

APRIL 26.—**Great Yarmouth.**—TAR-PAVING WORKS.—The Corporation invite tenders for tar-paving works for about 10,000 yds. super. on the South Quay and 4,500 yds. super. on the Marine-parade. Copies of conditions of tendering, etc., are to be obtained upon application at office of Mr. J. Wm. Cockrill, M.Inst.C.E., Borough Surveyor, Town Hall, Great Yarmouth.

APRIL 27.—**Carshalton.**—TAR-SPRAYING ROADS.—The U.D.C. invite tenders for treating about 20,000 yds. super. of road with bituminous dust-preventing material. Tenders are also invited for treating about 10,000 yds. super. of road with best refined tar. Mr. C. P. Lovelock, Clerk, District Council Offices, The Square, Carshalton.

APRIL 27.—**Hale.**—MAKING-UP.—Hale U.D.C. invite tenders for the making-up of Alan-drive, Hale. Plans, etc., can be seen, and bills of quantities, etc.,

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

obtained, at the office of the Council's Surveyor, Mr. S. A. Pickering.

MAY 2.—**Stockton Heath.**—STREET WORKS.—The R.D.C. of Runcorn invite tenders from specialists in tar macadam for the making of certain streets and passages in the parish of Stockton Heath. Plans, etc., may be seen, and quantities obtained (on deposit of 10s. 6d.), at Mr. Robert Garnett's, Sankey-street, Warrington.

MAY 4. — **Kilcullen.** — SEWERAGE WORKS.—The Council of Naas No. 1 Rural District invite tenders for carrying out the above works. Plans, etc., prepared by the Council's Engineer, Mr. F. Bergin, B.E., can be seen at office of Mr. D. J. Purcell, Clerk of Council, Council Offices, Naas, or at the office of the Engineer, 36, Westmoreland-street, Dublin.

MAY 7. — **Belford.** — MAINS. — The R.D.C. solicits tenders for supplying and laying of mains, etc., in connexion with Beadnell and Swinhoe water supply. Specifications, etc., can be had on application to Mr. C. A. Lake, District Surveyor, Warenford, Chathill.

STONES, MATERIAL, AND STORES.

APRIL 18.—**Midsomer Norton.**—CAST-IRON MAIN.—The Directors of Midsomer Norton Gas and Coke Company, Ltd., invite tenders for providing and laying 484 yds. of 3-in. cast-iron main in Norton Hill. Specification can be seen at the Secretary's Office, 14, High-street, Midsomer Norton.

APRIL 18.—**Tamworth.**—GRANITE.—The Corporation invite tenders for the supply of broken granite for roads. Particulars, etc., can be obtained of Mr. F. E. G. Bradshaw, Borough Surveyor, Municipal Offices, Tamworth.

APRIL 18. — **Wigan.** — MATERIALS.—The Gas Committee invites tenders for the supply of stores over the year. Forms of tender may be obtained from Messrs. Jos. Timmins, M.Inst.C.E., Engineer, etc., Borough Gasworks.

APRIL 19.—**Aldershot.**—MATERIALS.—Tenders are invited by the Council for supplying footway tar paving, "Tarmac," Devon or Rhenish basalt, Hungry Hill flints, water-cart, tar boiler, granite kerbing, and Keinton channelling. Mr. W. E. Foster, Clerk, Municipal Buildings, Aldershot.

APRIL 19.—**Maidstone.**—OIL.—The Standing Joint Committee for Kent invite tenders for the supply of best quality colza oil for the lanterns of the county constabulary force. Forms of tender, etc., can be obtained from the office of the Chief Constable, Head Quarters Police-station, Wren's Cross, Maidstone.

APRIL 19. — **Nelson.** — GRANITE SETTS.—The Plans and Buildings Committee invite tenders for the supply and delivery of about 250 tons of specially-dressed granite setts. Particulars may be obtained, and sample sett seen, at the office of the Borough Surveyor.

APRIL 20. — **Ipswich.** — ROAD MATERIALS.—East Suffolk C.C. invite tenders for the supply and cartage of road materials, tools, and road implements. Specification, etc., can be obtained on application to the Chief Surveyor of Main Roads, County Hall, Ipswich, and applicants are requested to state which form of tender they require, and also the name of the district (Ipswich, Halesworth, and Eye).

APRIL 20.—**Wallasey.**—STORES.—Wallasey U.D.C. invite tenders for supply for a period of twelve months stores required for use at their gas and water works. Further particulars, with form of tender, may be had, and samples inspected, on application at the Gas and Water Engineer's Office, Dock-road, Seacombe.

APRIL 21.—**Gloucester.**—STONE AND HAULING.—The Gloucester R.D.C. invite tenders for stone and hauling. Forms of tender may be obtained at the Offices of the Council, Berkeley House, Berkeley-street, Gloucester, from Mr. F. E. Weaver, the District Surveyor.

APRIL 21.—**Gravesend.**—STONE.—The B.C. invite tenders for the supply of road materials, etc. Specification, etc., may be obtained on application at the office of the Borough Surveyor, Mr. F. T. Grant, Town Hall, Gravesend.

APRIL 21. — **Uttoxeter.** — MATERIALS, ETC. — The R.D.C. of Uttoxeter invite tenders for contracts for the year ending March 31, 1911. Forms of tender, etc., may be obtained on application to the Surveyor, Mr. W. Walker, Carter-street, Uttoxeter.

APRIL 22.—**Brigg.**—GRANITE.—The U.D.C. invite tenders for about 350 tons of granite. Forms of tender can be obtained from Mr. G. S. Sowter, Clerk, Brigg.

APRIL 22. — **London.** — WHITE METAL, ETC. — The Directors of His Highness the Nizam's Guaranteed State Railways Company, Ltd., invite tenders for the supply of 12 tons of white metal, copper tubes and ingots, tin ingots, etc., as per specifications to be obtained at the Company's Offices for the sum of 5s. each, which amounts will not be returned. Mr. H. Randel, Secretary, 268, Winchester House, Old Broad-street, E.C.

APRIL 23.—**Leeds.**—LIME, ETC.—The Gas Committee invite tenders for the supply of about 12,000 tons of best Craven or Derbyshire lime; also for the supply of cast-iron pipes, retort castings, etc. Specifications, etc., may be obtained on application to Mr. R. H. Townsley, General Manager, Gas Offices, East-parade, Leeds.

APRIL 25.—**Burgess Hill.**—GRANITE.—Burgess Hill U.D.C. invite tenders for the supply of 775 tons broken granite and 70 tons fine granite. Forms to be obtained from the Clerk, Mr. A. F. Hardwick, Burgess Hill, Sussex

APRIL 25. — **Dundee.** — STORES, ETC.—The Dundee Water Commissioners invite tenders for supplying stores, etc., for twelve months. Specifications, etc., may be had on application to Mr. George Baxter, Engineer and Manager, Water Engineer's Office, Dundee.

* APRIL 25. — **London, N.E.** — GRAVEL. — The Guardians of the City of London Union invite tenders for 100 to 300 loads of good binding small gravel to their Workhouse, 42, Clifden-road, Lower Clapton, N.E. See advertisement in this issue for further particulars.

APRIL 25.—**Reigate.**—MATERIALS.—The Council of the Borough of Reigate invite tenders for the supply of materials and for the execution of works. Forms of tender, etc., may be obtained upon application to Mr. Fred T. Clayton, the Borough Surveyor.

APRIL 25.—**Uxbridge.**—MATERIALS.—The R.D.C. invite tenders for granite, gravel, and flints. Forms of tender, etc., may be obtained from Mr. John William Harrison, Engineer and Surveyor, Corn Exchange, Uxbridge.

APRIL 27.—**Carshalton.**—SUPPLIES.—Carshalton U.D.C. invite tenders for the supply of granite kerb, stoneware pipes, Portland cement, ironmongery, tools, manhole covers, and gully grates. Schedules, etc., may be obtained on application to Mr. W. Willis Gale, A.M.Inst.C.E., Surveyor, District Council Offices, The Square, Carshalton.

APRIL 27.—**Leicester.**—PAVING BLOCKS.—The Corporation of Leicester invite tenders for the supply of 50,000 Jarrah or Karri wood paving blocks. Form of tender, etc., may be obtained at office of Mr. E. George Mawbey, M.Inst.C.E., Borough Surveyor, Town Hall, Leicester, on payment of a deposit of 10s. to the Borough Treasurer. Cheques, etc., to be made payable to the Leicester Corporation.

APRIL 27.—**Leicester.**—PIPES FOR BEAUMONT LEYS SEWAGE FARM.—The Sewage Works and Farms Committee invite tenders for the supply and delivery of about 1,000 yds. of 9-in. cast-iron socketted pipes; also a quantity of 6-in. cast-iron socketted pipes, etc. Specification, etc., may be obtained at the Borough Surveyor's Office on payment of the sum of 10s. Cheques, etc., should be made payable to the Leicester Corporation.

APRIL 28. — **Whitwood.** — ELECTRICITY SUPPLY. — Whitwood U.D.C. invite tenders for works in connexion with the proposed supply of electricity in the urban district of Whitwood, in the West Riding of the county of York:—Copper cables, steel poles, wooden poles, watertight street light fittings, service connectors, meters, fuses, etc. Specifications, etc., may be obtained on application to Mr. H. Marsden, Electricity Works, Honley, near Huddersfield. All applications must be accompanied by a deposit of 2l. 2s.

MAY 2.—**Bristol.**—IRON AND STEEL.—The Sanitary and Improvement Committee of the City Council invite tenders for the supply of wrought-iron and mild steel for the year. Specifications, etc., may be obtained at the offices of the City Engineer, 63, Queen-square, Bristol, on payment of a deposit of 10s.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*ASSISTANT STOREKEEPER	Uganda Works Department	180*l.* per annum	April 26

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*FREEHOLD PROPERTY, THAMES DITTON—At the Mart	Driver, Jonas, & Co.	April 19
*FREEHOLD BUILDING ESTATE, PALMER'S GREEN, N.—At the Mart	Driver, Jonas, & Co.	April 19
*BUILDING MATERIALS, PLANT, ETC.—On the Premises	B. Phillips & Sons	April 19
*BUILDING MATERIAL, DENMARK HILL, S.E.—On the Premises	Veryard & Yates	April 19
*STOCK, MACHINERY, ETC., ROMFORD—On the Premises	Kemsley's	April 20
*FREEHOLD PROPERTY, BARKING—At the Mart	Protheroe & Morris	April 22
*FREEHOLD MANSION, CLAPHAM COMMON—At the Mart	Douglas Young & Co.	April 27
*FREEHOLD BUILDING PLOTS, WALLINGTON—Greyhound Hotel, Croydon	Robert W. Fuller, Moon, & Fuller	April 28
*FREEHOLD PROPERTY, NORTH FINCHLEY, N.—At the Mart	Charles Sparrow & Son	May 5

PRICES CURRENT OF MATERIALS.

**** Our aim in this list is to give, as far as possible, the average prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£	s.	d.
Best Stocks	1	9	0

Per 1000, Delivered at Railway Depôt.

	£	s.	d.
Picked Stocks for Facings	2	10	0
Flettons	1	7	0
Best Fareham Red	3	12	0
Best Red Pressed Ruabon Facing	5	0	0
Best Blue Pressed Staffordshire	3	15	0
Do. Bullnose	4	0	0
Best Stourbridge Fire Bricks	3	14	0
GLAZED BRICKS, Best White and Ivory Glazed Stretchers	10	17	6
Headers	10	7	6
Quoins, Bullnose, and Flats	14	7	6
D'ble Stretchers	16	7	6
Double Headers	13	7	6
One Side and two Ends	17	7	6
Two Sides and one End	18	7	6
Splays & Squints	15	17	6
Best Dipped Salt Glzd. Str'tch'rs	10	17	6
Headers	10	7	6
Quoins, Bullnose, and Flats	14	7	6
D'ble Stretchers	16	7	6

BRICKS, &c. (*continued*).

Per 1000, Delivered at Railway Depôt.

	£	s.	d.		£	s.	d.
Double Headers	13	7	6	Two Sides and one End	18	7	6
One Side and two Ends	17	7	6	Splays & Squints	15	17	6

Second Quality White and Dipped Salt Glazed, £1 5s. per 1000 less than best.

	s.	d.	
Thames and Pit Sand	6	6	per yard delivered.
Thames Ballast	5	0	,, ,,
Best Portland Cement	28	0	per ton, ,,
Best Ground Blue Lias Lime	19	0	,, ,,

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 11s. 6d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 6d. per ton at riy. dpt.

STONE.

Per Ft. Cube.

	s.	d.
BATH STONE — delivered on road waggons, Paddington Depôt	1	6½
Do. do. delivered on road waggons, Nine Elms Depôt	1	9½
PORTLAND STONE (20 ft. average)— Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	1

STONE (*continued*).

PORTLAND STONE (*continued*).—

Per Ft. Cube.

	s.	d.
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	2½

Per Ft. Cube, Delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	10	Red Corsehill in blocks	2	2
Beer in blocks	1	6	Closeburn Red Freestone	2	0
Greenshill in blocks	1	10	Red Mansfield Freestone	2	4
Darley Dale in blocks	2	4			

YORK STONE—*Robin Hood Quality.*

Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
	2	6
6 in. rubbed two sides ditto, ditto	0	11½
3 in. sawn two sides slabs (random sizes)	0	7½
2 in. to 2½ in. sawn one side slabs (random sizes)	0	6
1½ in. to 2 in. ditto, ditto	0	5

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3	0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
	3	0
6 in. rubbed two sides ditto	1	2
3 in. sawn two sides slabs (random sizes)	0	5
2 in. self-faced random flags		

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portwadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Rosemary" brand plain (per 1000)	48 0
Hip and Valley per doz.)	3 7	Best Ornamental (per 1000)	50 0
Best Broseley (per 1000)	50 0	Hip (per doz.)	4 0
Do. Ornamental (per 1000)	52 6	Valley (per doz.)	3 8
Hip and Valley (per doz.)	4 0	Best "Hartshill" brand, plain sand-faced (per 1000)	50 0
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Do. pressed (per 1000)	47 6
Do. Ornamental (per 1000)	60 0	Do. Ornamental (per 1000)	50 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6
Best Red or Mottled Staffordshire do. (Peakes) (per 1000)	51 9	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental do. (per 1000)	54 6	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 1	Hip (per doz.)	4 0
Valley (per doz.	3 8	Valley (per doz.)	3 6

WOOD.

Building Wood.	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0	... 15 10 0
Deals: best 3 by 9	13 10 0	... 14 10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0	... 12 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best.
Battens: seconds	0 10 0	" "
2 in. by 4 in. and 2 in. by 6 in.	9 10 0	... 10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0	... 10 0 0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	"
	At per load of 50 ft.	
Fir timber: best middling Danzig or Memel (average specification)	£ s. d. 5 0 0	... £ s. d. 5 10 0
Seconds	4 10 0	... 5 0 0
Small timber (8 in. to 10 in.)	3 17 6	... 4 0 0
Small timber (6 in. to 8 in.)	3 5 0	... 3 10 0
Swedish balks	2 12 6	... 3 0 0
Pitch-pine timber (30 ft. average)	4 10 0	... 5 5 0
Joiners' Wood.	At per standard.	
White Sea: first yellow deals, 3 in. by 11 in.	24 10 0	... 25 10 0
3 in. by 9 in.	22 10 0	... 23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0	... 18 0 0
Second yellow deals, 3in. by 11 in.	19 0 0	... 20 0 0
" " 3 in. by 9 in.	18 0 0	... 19 10 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0	... 15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0	... 15 0 0
Battens, 2½ in. and 3 in. by 7 in.	1 10 0	... 12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0	... 22 10 0
Do. 3 in. by 9 in.	18 10 0	... 19 10 0
Battens	14 0 0	... 15 0 0
Second yellow deals, 3 in. by 11 in.	16 10 0	... 17 10 0
Do. 3 in. by 9 in.	15 0 0	... 16 0 0
Battens	11 10 0	... 12 10 0
Third yellow deals, 3 in. by 11 in.	13 10 0	... 14 10 0
Do. 3 in. by 9 in.	13 0 0	... 14 0 0
Battens	10 10 0	... 11 0 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15 0 0	... 16 0 0
" " 3 in. by 9 in.	14 0 0	... 14 10 0
Battens	11 10 0	... 12 10 0
Second white deals, 3 in. by 11 in.	14 0 0	... 15 0 0
" " 3 in. by 9 in.	13 0 0	... 14 0 0
Battens	10 10 0	... 11 0 0
Pitch-pine: deals	19 0 0	... 21 0 0
Under 3 in. thick extra	0 10 0	... 1 0 0
Yellow pine—First, regular sizes	44 0 0	upwards.
Oddments	32 0 0	"
Seconds, regular sizes	33 0 0	"
Oddments	28 0 0	"
Kauri Pine—Planks, per ft. cube	0 3 6	... 0 5 0
Danzig and Stettin Oak Logs— Large, per ft. cube	0 3 0	... 0 3 9
Small " "	0 2 6	... 0 2 6
Wainscot Oak Logs, per ft. cube	0 5 6	... 0 6 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 8½	... 0 0 9½
¾ in. do. do	0 0 7	... —
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0 0 10	... 0 1 1
Selected, Figury, per ft. super as inch	0 1 6	... 0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10	... 0 1 0
Teak, per load	18 0 0	... 22 0 0
American Whitewood Planks, per ft. cube	0 4 0	... 0 5 0
Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6	... 0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0	... 0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0	... 1 0 0
1 in. by 7 in. white, planed and shot	0 12 0	... 0 14 6
1 in. by 7 in. white, planed and matched	0 12 6	... 0 15 0

WOOD (continued).

Joiners' Wood (continued)—	Per square. £ s. d.	£ s. d.
1¼ in. by 7 in. white, planed and matched	0 15 0	... 0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0	... 0 13 6
1 in. by 7 in. " "	0 14 0	... 0 18 0
¾ in. by 7 in. white " "	0 10 0	... 0 11 6
1 in. by 7 in. " "	0 12 9	... 0 15 0
6 in. at 6d. to 9d. per square less than 7 in.		

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 0 0	... 7 10 0
Compound Girders, ordinary sections	9 0 0	... 10 0 0
Steel Compound Stanchions	11 0 0	... 12 0 0
Angles, Tees, and Channels, ordinary sections	9 0 0	... 10 0 0
Flitch Plates	9 0 0	... 9 10 0
Cast Iron Columns and Stanchions including ordinary patterns	7 10 0	... 8 10 0

METALS.

	Per ton, in London. £ s. d.	£ s. d.
Iron— Common Bars	8 10 0	... 9 0 0
Staffordshire Crown Bars, good merchant quality	8 15 0	... 9 5 0
Staffordshire "Marked Bars"	10 10 0	... —
Mild Steel Bars	8 15 0	... 9 5 0
Hoop Iron, basis price	9 5 0	... 9 10 0
" " Galvanised	17 0 0	... —
("And upwards, according to size and gauge.)		
Sheet Iron Black— Ordinary sizes to 20 g.	9 15 0	... —
" " 24 g.	10 15 0	... —
" " 26 g.	12 5 0	... —
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	... —
Ordinary sizes to 22 g. and 24 g.	15 10 0	... —
" " 26 g.	16 10 0	... —
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 0 0	... —
" " 22 g. and 24 g.	18 10 0	... —
" " 26 g.	20 0 0	... —
Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 8 ft. 20 g.	14 10 0	... —
" " 22 g. and 24 g.	14 15 0	... —
" " 26 g.	16 5 0	... —
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 0 0	... —
Best Soft Steel Sheets, 22 g. & 24 g.	13 0 0	... —
" " " 26 g.	15 0 0	... —
Cut Nails, 3 in. to 6 in.	10 10 0	... 11 0 0
(Under 3 in., usual trade extras.)		

Lead, &c.	Per ton, in London. £ s. d.	£ s. d.
Lead—Sheet, English, 4lb. and up.	16 10 0	... —
Pipe in coils	17 0 0	... —
Soil pipe	20 0 0	... —
Compo pipe	20 0 0	... —
Zinc—Sheet—	In casks of 10 cwt.	
Vieille Montagne	28 12 6	... —
Silesian	28 5 0	... —
Zinc, in bundles, 1s. per cwt. extra.		
Copper— Strong Sheet, per lb.	0 1 0	... —
Thin " "	0 1 1	... —
Copper nails "	0 0 10	... —
Copper wire "	0 0 10	... —
Brass— Strong Sheet "	0 0 11	... —
Thin "	0 1 0	... —
Tin—English Ingots "	0 1 5	... —
Solder—Plumbers' "	0 0 7	... —
Tinmen's "	0 0 9	... —
Blowpipe "	0 1 0	... —

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

¼ Hartley's	2½d.	Figured, Oxford Rolled, & 'Oceanic' Glass, white	3½d.
⅜ "	2½d.	Ditto, tinted	5d.
½ "	2½d.		

Oils, &c.		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 3
" " in barrels	"	0 3 4
" " in drums	"	0 3 7
Boiled " in barrels	"	0 3 7
" " in drums	"	0 3 10
Turpentine in barrels	"	0 3 6
" in drums	"	0 3 8
Genuine Ground English White Lead	per ton	20 10 0
Red Lead, Dry	"	20 0 0
Best Linseed Oil Putty	per cwt.	0 7 6
Stockholm Tar	per barrel	1 12 0

Varnishes, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0

Varnishes, &c. (continued).	Per gallon. £ s. d.
Eggshell Flating Varnish	0 13 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERTRIDWR.—For erecting a proposed workmen's library and institute, Windsor Collieries. Mr. Iltyd Thomas, F.S.I., 17, Quay-street, Cardiff:—

J. Howells	£7,100 0 0	A. J. Colborne	£6,679 0 0
W. Williams	6,999 0 0	D. Davies & Sons	6,654 0 0
Blundell & Bevan	6,958 0 0	D. W. Davies & Howell	6,496 0 0
C. Jenkins & Son	6,850 0 0	Knox & Wells	6,485 0 0
Hamilton & Millard	6,845 0 0	F. Bond	6,298 0 0
R. Jones	6,836 5 1	Davies & Lloyd	6,199 0 0
T. F. Howells	6,830 0 0	J. Lewis	6,100 0 0
W. T. Morgan	6,800 0 0	J. Williams, Brynteifi, Abertridwr*	6,080 0 0
F. Bristow	6,780 0 0	W. Williams & Sons	5,989 0 0
E. R. Evans Bros.	6,749 0 0		
W. Thomas & Co.	6,719 4 4		

ASHBURTON (Devonshire).—For addition to building for Asburton and Buckfastleigh Cottage Hospital Committee. Mr. C. E. Robinson, architect, Holm-cross, Ashburton:—

E. Winsor, Ashburton £69 10

BECKTON.—For the erection of a new factory and stores, for the London Flambo Fuel Company at Beckton, North Woolwich. Mr. John Moir Kennard, architect:—

J. E. Whiter & Co.* £2,347 3

BERE ALSTON.—For new elementary school for 124 boys, for Devon County Education Authority. Mr. Percy Morris, County Architect (Education), 1, Richmond-road, Exeter. Quantities by Mr. Bruce Dawson, 6, Old Queen-street, Westminster, S.W.:—

Pearn Bros.	£2,184 0 0	Wakeham Bros.	£1,405 12 0
F. J. Stanbury	1,560 16 6	C. B. James	1,372 1 6
A. Andrews	1,560 0 0	J. L. Richards	1,362 11 2
Lapthorn & Co.	1,540 0 0	J. Paynter	1,312 5 2
C. Bryer, jun.	1,533 13 2	W. E. Bennett, Bodmin*	1,312 1 7
R. F. Yeo & Sons	1,428 1 9		

[Architect's estimate, £1,550.]

BERKHAMSTED.—For erecting new residence, for Mr. W. S. Rogers. Messrs. Moscrop-Young & Glanfield, architects, 20, Brook-street, Bond-street, W.:—

Collwell & Edgar	£1,325	G. B. Tutt & Son	£1,287
H. & J. Matthews	1,299	Honour & Son	1,236
E. Smith & Son	1,296	Brightman & Son*	1,147
Miskin & Sons	1,295		

BULFORD (Wilts).—For building a motor-garage, for Messrs. Bartlett & Co. Mr. A. F. Long, architect, 53, Market-place, Warminster:—

Smith & Rowden	£299	W. E. Chivers & Sons, Devizes*	£237
Billett & Musselwhite	270		
F. Burton	250		

ECCLES (Lancs).—For extension of electricity station, Cawdor-street, Patricroft, for the Electricity Committee. Mr. N. Hartley Hacking, architect, 50, Blackfriars, Manchester:—

N. Brookes & Sons, Patricroft* £750

GOSPORT.—For new cookery school in connexion with the Grove-road schools, Gosport. Mr. Edwin J. Tench, A.R.I.B.A., architect, Norwich and Bury St. Edmunds:—

South Western Joinery Co.	£592 13 6	G. D. Osgood	£395 0 0
Tanner	480 0 0	F. W. Johnson	388 18 0
F. A. Lane	425 0 0	Lear & Sons, Alverstoke*	381 0 0
C. M. Dash	419 0 0		

HERTFORD.—For laying a new wood floor in the dining hall at the Union Workhouse, for the Guardians:—

E. B. Kemp, Raynham-road, Hertford... £34 19

LEICESTER.—For new factory and warehouse, Sanvey-gate, Leicester. Messrs. Topott & Son, architects, 15, Hotel-street, Leicester:—

F. Sleath	£5,219 0 0	W. Potter	£4,804 19 0
Herbert & Sons	5,170 0 0	Bradshaw Bros.	4,779 11 6
W. M. Sharp	4,977 0 0	W. Hanson	4,744 0 0
Duxbury & Co.	4,940 0 0	W. Bradford	4,739 0 0
J. Chapman	4,899 0 0	W. Haddon	4,707 8 0
Bowles & Son	4,897 0 0	Clark & Garrett	4,686 0 0
D. Booth	4,865 0 0	W. H. Cox & Co.	4,684 5 3
Mason & Sons	4,840 0 0	Marston & Son, Leicester*	4,682 0 0
J. Cole & Sons	4,822 0 0		
E. Fox	4,809 0 0		

LONDON.—For paving portion of Sun-lane, for the Greenwich Borough Council:—

G. J. Anderson £102
J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster* 39

LONDON.—For road repairing and tarpaving work at the Western Fever Hospital, Seagrave-road, Fulham, S.W., for the Metropolitan Asylums Board. Mr. W. T. Hatch, M.Inst.C.E., Engineer-in-Chief:—

T. Adams	£264	W. H. Wheeler & Co., Ltd.	£187
Constable, Hart, & Co., Ltd.	213	Grounds & Newton	175
E. Wall	238	H. Boyer, Terminus Wharf, Paddington, W.*	168
G. Wimpey & Co.	230		

LONDON.—For cleaning and painting and repairs at (a) the Grove Fever Hospital, Tooting-grove, Tooting Graveney, S.W.; and at (b) the North Western Fever Hospital, Lawn-road, Hampstead, N.W., for the Metropolitan Asylums Board. Mr. W. T. Hatch, M.Inst.C.E., Engineer-in-Chief:—

The Grove Hospital.—Cleaning and Painting Works and Repairs.

E. Wall	£2,777	W. Hussey	£1,876
M. McCarthy	2,066	L. Kazak, 3 and 4, Station-road, Belvedere*	1,824
B. E. Nightingale	2,050		
S. Squire	2,027		

North Western Hospital.—Cleaning and Painting Works and Repairs.

J. C. Mather	£1,977 0	S. Squire	£1,251 0
W. Shurmur & Sons, Ltd.	1,611 0	W. Hussey	1,237 0
B. E. Nightingale	1,390 0	L. Kazak, 3 and 4, Station-road, Belvedere*	1,218 0
A. H. Inns	1,371 10		

LONDON.—For cleaning and painting and repairs at (a) the Western Fever Hospital, Seagrave-road, Fulham, S.W.; (b) the Brook Fever Hospital, Shooter's-hill, Woolwich; (c) the South-Eastern Fever Hospital, Avonley-road, New Cross, S.E., for the Metropolitan Asylums Board. Mr. W. T. Hatch, M.Inst.C.E., Engineer-in-Chief:—

Western Hospital.—Cleaning and Painting Works and Repairs.

E. Wall	£280	L. Kazak	£192
G. McArthur & Co.	250	A. H. Inns	179
W. Hussey	226	B. E. Nightingale	158
J. Moseley	225	J. Scott Fenn	139
W. Shurmur & Sons, Ltd.	198	S. Squire, 25, Saxon-road, Bow*	137

The Brook Hospital.—Cleaning, Painting, and Repairs.

W. Harris	£480	S. Squire	£340
J. Moseley	447	L. Kazak	332
B. E. Nightingale	410	J. Scott Fenn, 42, William-street, Woolwich*	329
J. Hocking	390		
S. T. Wright	389		

South-Eastern Hospital.—Cleaning, Painting, and Repairs.

E. Dyke	£239 10	J. Scott Fenn	£163 0
L. Kazak	235 0	B. E. Nightingale, Albert-embankment, S.E.*	152 0
W. Hussey	201 0		
S. Squire	190 0		

LONG EATON.—For widening of existing bridge over the Erewash Canal, Derby-road, for the Urban District Council. Mr. F. Worrall, A.M.Inst.C.E., Engineer and Surveyor, Electricity Supply Works, Long Eaton:—

C. Baker & Sons	£3,928 9 8	H. Ashley	£1,365 4 5
A. Thorne & Sons	2,098 18 2	A. H. Price & Co.	1,300 1 11
W. Muirhead & Co.	1,670 13 6	Johnson & Longley	1,312 19 1
A. Hyslop	1,447 12 7	G. F. Tomlinson, Derby*	1,296 0 8

LONG EATON.—For bridge over Erewash Canal, Lawley-road, for the Urban District Council. Mr. F. Worrall, A.M.Inst.C.E., Engineer and Surveyor, Electricity Supply Works, Long Eaton:—

C. Baker & Sons	£8,322 7 4
A. Thorne & Sons	5,360 3 2
W. Muirhead & Co.	4,471 1 2
A. H. Price & Co.	4,214 0 4
A. Hyslop	3,962 12 6
G. F. Tomlinson	3,835 3 7
H. Ashley	3,767 18 8
Johnson & Longley, Leicester*	3,629 5 10

MIRFIELD.—For works, for Mr. S. J. G. Lister, Coppin Hall-road, Mirfield. Messrs. Ainley & Hirst, architects and surveyors, Slaithwaite:—

Masons' Work: Mr. H. Unsworth, Mirfield* .. £149 7 0
Joiners' Work: W. Smith, Battyeford* 102 15 0
Plumber and Glaziers' Work: J. W. Dickinson, Mirfield* 36 17 0
Painters' Work: Frost & Wilkinson, Bradford* 11 2 7

NUNEATON.—For additional buildings at the electricity works, Coton-road, for the Electricity Committee. Mr. S. Cameron Gibson, Borough Electricity Engineer:—

A. Bedingham	£172 10	G. Smith & Sons, Chilvers Coton*	£134 0
T. Smith	155 10		
C. E. & W. Wincott	148 10		

SALHOUSE.—For work at Salhouse non-provided schools, Norfolk (alterations and additions). Mr. Herbert J. Green, Architect and Diocesan Surveyor, 31, Castlemeadow, Norwich, King's Lynn, and Lowestoft:—

J. Youngs & Son	£593 0 0	Tooley & Youngs	£569 0 0
G. G. Stowers & Son	583 0 0	R. W. Riches, Postwick‡	547 0 0
W. J. Hannant	577 0 0	Sparkes & Latten	537 10 1

‡ Accepted conditionally.

SLAITHWAITE.—For the erection of stable, coach-house, etc., at Calf Hey. Messrs. Ainley & Hirst, architects and surveyors, Slaithwaite:—

Masons' Work: E. Eagland & Sons, Slaithwaite* £179 10
Plumbers' Work: Bamforth & Shaw, Slaithwaite* 12 10
Slaters' Work: W. J. W. Rimmer, Slaithwaite* .. 20 10
Plasterers' and Painters' Work: B. A. Sutcliffe, Slaithwaite* 9 9

SPENNYMOOR.—For making of back St. Paul's Gardens, for the Urban District Council. Mr C. R. Spencer, surveyor, Silver-street, Spennymoor:—

J. Hunter	£39 17 3	G. Byers, Spenny-moor*	£36 10 0
Bradley & Co.	37 0 0		

THURNSCOE.—For new footpaths in Lidget-lane, Back-lane, Shepherd-lane, and High-street, for the Urban District Council. Mr. R. Higginbottom, Surveyor to the Urban District Council, Thurnscoe:—

F. Eyre, Hillsborough, near Sheffield £2,070

TOLLESBURY.—For making-up of new road, for Maldon Rural District Council. Mr. William Almond, Surveyor, 6, Market-hill, Maldon:—

J. Fisher	£1,381 12 7
J. C. Trueman, Ltd.	628 15 0
H. Gurton	584 6 10

TOTTENHAM.—For alterations to discharge block at the North-Eastern Fever Hospital, St. Anne's-road, Tottenham, N., for the Metropolitan Asylums Board. Mr. W. T. Hatch, M.Inst.C.E., Engineer-in-Chief:—

E. Wall	£162 0 0	L. Lown & Co.	£119 10 4
B. Jewell	142 0 0	J. Oram & Son, Waltham Abbey, Essex‡	110 0 0
W. Shurmur & Sons, Ltd.	135 0 0		
Pastersfield & English	125 0 0		

‡ Accepted subject to sanction of the Local Government Board.

WANSTEAD.—For making-up Warwick-road, for the Urban District Council. Mr. C. Herbert Bressey, Surveyor:—

P. R. Paul	£789	W. Griffiths & Co., Ltd.	£704
G. Bell & Sons, Ltd.	775	G. J. Anderson	696
T. Adams	762	Parsons & Parsons	688
J. Mowlem & Co., Ltd.	753	J. Jackson	585
D. J. Jackson	720		

[Surveyor's estimate, £758 3s. 8d.]

YORKLEY.—For new handicraft room, Council school, for Gloucestershire Education Committee. Mr. R. S. Philips, architect:—

W. G. Heines	£389 0 0	T. Merrett & Son	£292 0 0
Dean Forest Road Rolling Co.	373 6 0	E. J. Flewelling, Lydbrook*	288 12 6
F. W. Peer	307 0 0		

UPPINGHAM.—For International Stores. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, London, W.C.:—

—	A.			B.			C.		
	£	s.	d.	£	s.	d.	£	s.	d.
Mason & Son*	345	0	0	75	10	0	172	0	0
Coulson & Lofts	382	0	0	92	0	0	214	0	0
Thackeray & Co.	384	17	7	111	15	0	222	9	7
Maxey & Son	404	0	0	99	0	0	230	0	0
Hawes & Sons	443	0	0	107	0	0	218	0	0
Theobald & Sons	488	0	0	130	0	0	298	0	0

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